



CFA Institute

CFA Institute Research Challenge

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Team 1

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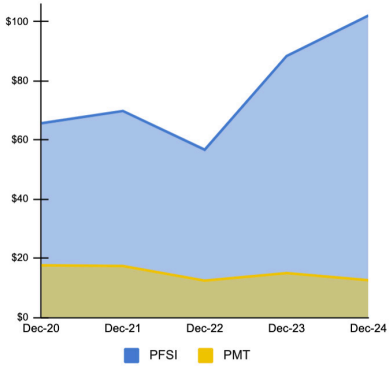
Executive Summary

Figure 1: Summary

Recommendation	BUY
Date	12/31/2024
Ticker	PFSI
Exchange	NYSE
Industry	Mortgage Banking and Investment Management
Market Cap *	\$1.09 Billion
Shares Outstanding *	51.26 Million
Current Price *	\$102.35
Target Price	\$128.56
Upside (Downside)	25.61%
P/S	2.44

*All prices as of close Dec 31, 2024

Figure 2: 5-Year PFSI & PMT Share Price



Source: Google Finance

Figure 3: Investment Thesis



Source: Team Consensus

PennyMac Financial Services Inc. (PFSI) is a leading American mortgage finance company, with three main lines of business: mortgage production, mortgage servicing and investment management. PFSI's stock price presents a two year upside of 81% from Dec. 2022 (\$56.66) to Dec. 2024 (\$102.35). Production volumes exceeding prepayment, competent management, technological investments and a diversified business model lead us to believe that PFSI's true value lies north of its current price.

INVESTMENT SUMMARY

We issue a **BUY** recommendation for PFSI based on our 12-month target price of **\$128.56**, weighted by our Discounted Cash Flow model and Price/Share peer group approach. This target price reflects a **25.61%** upside to the Dec. 31, 2024 close price of **\$102.35**.

HIGHLIGHTS

1. Diversified lines of business help navigate economic uncertainty: PFSI's diversified business structure has enabled the company to maximize shareholder returns year over year within periods of economic volatility and fluctuating rate environments. On September 30, 2024 PFSI disclosed servicing of approximately 2.5 million loans with an unpaid principal balance (UPB) of \$570 billion. PFSI's production segment spans correspondent lending, broker direct, and consumer direct channels. The company's servicing segment earns fees from managed mortgage servicing rights (MSRs) owned by PFSI, PMT and other entities. PFSI's investment management segment earns fees from managing PMT, a real estate investment trust (REIT) owned by its subsidiary PNMAC. PFSI's multi-pronged operational breakdown provides the company with multiple revenue streams, offsetting adverse market fluctuations. PFSI's focus on expanding consumer direct production has solidified the company's current position within the mortgage finance industry, supporting both its near and long-term performance and market relevance.

2. Excellent customer service and low pricing enhances competitive positioning: PFSI demonstrates a strong commitment to increasing its competitive advantage through award winning customer service, low mortgage rates and multi-channel product offerings. As of September 30, 2024, PFSI's broker direct lock volume (\$5.3 billion) was approximately equal to its consumer direct lock volume (\$5.2 billion), demonstrating the firm's ability to appeal across its primary customer bases. The team conducted interviews with a leading mortgage broker who emphasized PFSI's low mortgage rates and ease of access, as primary reasons for use. PFSI's focused approach to meeting its customer needs enhances customer retention, while contributing to the firm's future growth.

3. Operational Efficiency and Experienced Industry Management: PFSI's experienced management team comprises diverse talent from various backgrounds, including top investment managers and artificial intelligence and digital technology experts. PFSI's longer term focused (compared to industry) equity incentive plans allows talented executives to remain focused on effectively increasing shareholder returns.

4. Digital and Marketing Investments into the Future: PFSI invests in cutting-edge digital tools and targeted marketing strategies to deepen customer engagement and drive growth, across its production and servicing platforms. Through leveraging advanced analytics, user-friendly mobile applications, and AI-driven outreach campaigns, the company has improved its borrowing experience, whilst broadening brand visibility. In recent years, PFSI has experienced steady increases in online traffic, indicating the

Business Overview

Figure 4: Production

Business: Origination, acquisition, and sale of residential mortgage loans.
Q3 2024 Pretax Income: \$107.9 million
 Compared to \$41.3M in the prior quarter and \$25.2M in Q3 2023.
Loan Acquisitions & Originations (UPB): \$31.7B
 Up 17% from prior quarter and 26% from Q3 2023.

Figure 5: Servicing

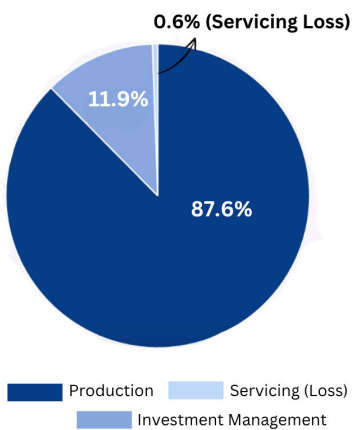
Business: Loan administration, collection, and default management.
Q3 2024 Pretax Income (Reported): -\$14.6 million (Loss)
 Compared to \$88.5M in the prior quarter and \$101.2M in Q3 2023.
Excl. Valuation & Non-Recurring: \$151.4 million (Pretax Income)
 Up from \$149.0M in the prior quarter.

Figure 6: Investment Management

Business: Sourcing, performing diligence, bidding, closing asset acquisitions, and managing acquired assets.
Q3 2024 Pretax Income: \$0.7 million
 Down from \$4.0M in the prior quarter but up from \$0.4M in Q3 2023.
Net AUM: \$1.9 billion

Figures 3-5 Source: PFSI Form 10Q

Figure 7: Q3 2024 Segments



Source: Team Consensus

With headquarters in Westlake Village, California and founded in 2008, PFSI operates as a residential mortgage holding company. PFSI was founded by investment firms Blackrock and Highfields Capital to support the introduction of a federal mortgage modification program, which aimed to stabilize the United States' (U.S.) housing market, during the subprime mortgage crisis. The program helped homeowners avoid foreclosure through the purchasing of distressed mortgages. PFSI's strength lies within its integrative business model that combines efficient loan origination with its scalable loan servicing platform. On September 30, 2024, PFSI's total loan production portfolio totaled \$107 billion UPB, with a pretax income of \$107.9 million (Figure 4), ranking the company number 2 in mortgage production; servicing totaled \$648 billion UPB, with a pre-tax loss of \$14.6 million (Figure 5), ranking the company number 6 in mortgage servicing. PFSI is focused on the growth of its production and servicing portfolios through innovative digital solutions and high-touch borrower support.

BUSINESS MODEL

PFSI operates in three segments: Production, Servicing, and Investment Management. PFSI's production and servicing segment form its mortgage banking business which includes mortgage loan origination, acquisition, and sale activities, and the investment management segment includes activities such as performing diligence and managing acquired assets (Figure 6). PFSI generates the majority of its revenue from its mortgage banking business (Figure 7).

KEY REVENUE DRIVERS

1. Loan Origination Volumes

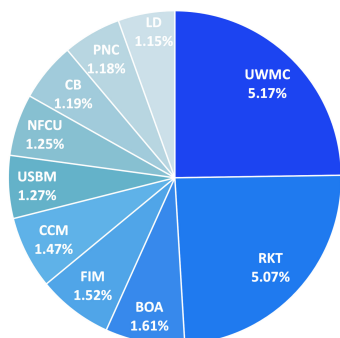
Higher origination volumes drive increased revenue within PFSI's Production segment. As of September 30, 2024, PFSI's total loan acquisitions and originations reached \$31.7 billion in UPB (Figure 4), marking a 17% increase from the prior quarter. This growth supports gain-on-sale revenue, which is generated from the difference between the cost of originating loans and their sale price or securitization value.

2. Servicing Portfolio Growth

An expanding servicing portfolio generates recurring fee income and enhances cross-selling opportunities. On September 30, 2024, PFSI's Pre Tax servicing Income reached \$151.4 million, up from \$149.0 million in June 30, 2024. Retained mortgage servicing rights (MSRs) provide a consistent "interest income" stream, reducing dependence on origination volumes. MSRs are marked-to-market, resulting in valuation gains or losses that introduce earnings volatility but also serve as an effective hedge against interest rate fluctuations. Currently, PFSI targets a hedge coverage ratio of 80% on its mortgage servicing rights.

Industry Overview

Figure 8: Market Share



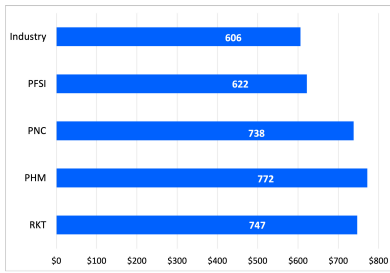
Source: FFIEC 2024

The mortgage servicing industry comprises traditional banks, such as Wells Fargo and Bank of America; government-sponsored enterprises (GSEs), such as Fannie Mae; and non-bank mortgage service providers, such as PennyMac Financial Services, Rocket Companies, and United Wholesale Mortgage (Figure 8).

BUSINESS SCOPE

Leading mortgage companies have expanded their revenue generating activities by establishing REITs to invest in and manage mortgage-related assets, in addition to traditional production and servicing. PFSI earns interest income on mortgage-related assets through acquired, pooled, and securitized high-quality credit loans, generated by its production activities.

Figure 9: Servicer Satisfaction

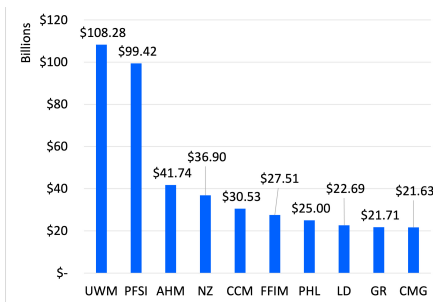


Source: J.D. Power 2024

CUSTOMER SATISFACTION AND INDUSTRY RANKINGS

Since 2013, Scotsman Guide has ranked the most productive lenders in the U.S. In 2024, Scotsman ranked the top three lenders by total volume as United Wholesale Mortgage (UWM), PennyMac Financial Services (PFSI), and Amerihome Mortgage Group Co. (AHM) (Figure 10). According to J.D. Power’s 2024 Mortgage Servicing Satisfaction Survey, PFSI ranks above the industry average of 606 but below its banking and non-banking mortgage servicing peers, as seen in Figure 9 and Appendix 6. The 2024 U.S. Mortgage Servicer Satisfaction Study named Rocket Mortgage, Regions Mortgage, and Chase as the top three lenders, highlighting PFSI’s opportunity for growth and potential to increase its upside within the servicing segment.

Figure 10: Total Volume



Source: Scotsman Guide 2024

INDUSTRY TRENDS AND CHALLENGES

1. The consolidation trend in the mortgage industry is intensifying as larger lenders acquire smaller competitors to expand their market share and customer base. With increasing market transparency and diminishing information asymmetry, the cost of acquiring new customers is rising, creating greater competition in the sector.

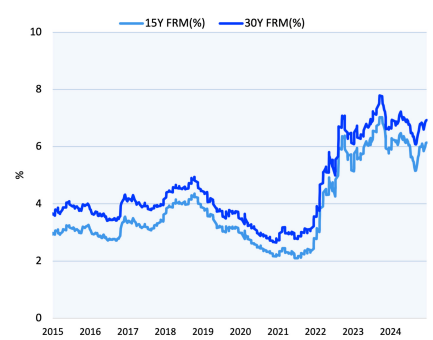
2. In a declining interest rate environment, lenders must navigate interest rate risk while ensuring transparent and fair rate conversions. At the same time, lenders must ensure customers understand the fluctuations inherent in interest rates. PFSI, for example, faced legal and reputational challenges for replacing a LIBOR-based benchmark rate with a fixed initial rate instead of transitioning to SOFR. This reflects broader industry trends, as seen in the steady increase of weekly fixed-rate mortgages from 2015 to 2024 (Figure 11).

3. The integration of artificial intelligence and digitalization is reshaping mortgage processes, applications, and lending models. Digitalization enhances operational efficiency and improves customer experience but also requires continued investment in technological advancements to remain competitive.

4. The regulatory environment for both bank and non-bank lenders is becoming more stringent, with a particular focus on fee transparency, online data security, consumer privacy, and fraud prevention. Key concerns include whether lenders impose additional fees for third-party payments (e.g., online or phone payments) and whether customer data is improperly sold or leased to third parties.

5. In the post-pandemic environment, the mortgage industry must prioritize transparency, service continuity, and effective communication to meet rising customer expectations. During the COVID-19 pandemic, PFSI faced allegations of not adequately notifying borrowers when rejecting new mortgage relief applications. Some borrowers also misunderstood repayment extension terms, leading to higher interest rates and fees. These incidents highlight the need for clearer, standardized guidelines in the industry for borrower assistance.

Figure 11: Weekly FRM



Source: Freddie Mac 2024

ENVIRONMENT SOCIAL AND GOVERNANCE

Figure 12: ESG Scorecard

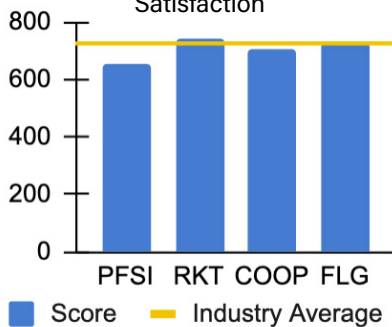
	Env.	Social	Gov.	Total
PFSI	7	29	30	26
RKT	10	29	30	26
COOP	13	23	29	25
FLG	34	25	24	26

Source: S&P Global

ENVIRONMENT

PFSI is rated low risk according to Sustainalytics' ESG Risk Rating. The company’s S&P Global environmental score of 7 is below the industry average of 21, though justified by its relatively limited carbon footprint. PFSI focuses on the minimization and reduction of its environmental impact, through implementing waste reduction, waste management, energy efficiency, and water conservation initiatives, while promoting sustainability awareness and environmental management best practices across its operations.

Figure 13: Mortgage Origination Satisfaction



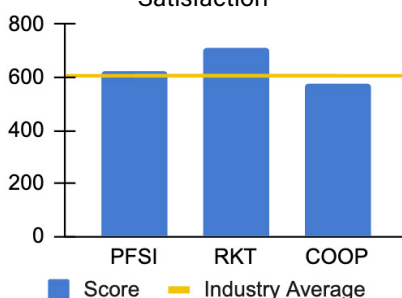
Source: J.D. Power (2024)

SOCIAL

Customers: PFSI enhances customer experiences through proactive complaint management systems, financial difficulty assistance programs, and transparent products and servicing information. PFSI was ranked as a #1 Mortgage Lender in VA and FHA loans by the Scotsman Guide and named the Best Mortgage Lender for FHA loans by NerdWallet. PFSI's December 2023 Customer Satisfaction Surveys revealed a 94% customer satisfaction rating. J.D. Power ranks PFSI below the industry average in mortgage origination satisfaction but above average in mortgage servicing satisfaction, representing an opportunity for growth and increased market share in the firm's largest business segment: production (Figure 13 to Figure 14).

Workforce: PFSI is focused on strengthening its workforce through leadership, mentorship and training programs. In 2023, PFSI was designated a "Most Loved Workplace" and "Top 100 Company" (38th out of 100) by the Best Practice Institute. PFSI also received the 2023 Top Employer for Women award from Mortgage Women Magazine. The company rewards employees through performance based incentives that highlight exemplary conduct and performance. One such incentive being discretionary bonuses, which is offered through the "PennyPerks Reward Program". PFSI also provides employees access to health and wellness programs to enhance satisfaction and increase retention.

Figure 14: Mortgage Servicing Satisfaction



Source: J.D. Power (2024)

GOVERNANCE

Executive Compensation: PFSI's CEO compensation is divided between an annual base salary, annual performance-based incentives, and long-term equity awards. PFSI's cash based salaries were capped at 37%, while equity compensation paid out was 63%. PFSI has gradually transitioned to a heavier weighted equity-based executive management compensation plan to prioritize the maximization of shareholder returns, as evidenced by the decrease in PFSI's total executive compensation awarded from 2018 to 2023, despite consistently enhanced year-over-year shareholder returns. PFSI's executive compensation programs currently rank about average compared to its peers. PFSI's ability to increase shareholder returns while adhering to a relatively strict LTSI compensation plan leads us to believe the company is uniquely positioned to maximize shareholder wealth in the years to come.

Board of Directors: PFSI's board is currently led by Chairman and Chief Executive Officer David Spector and independent lead director Jeffrey Perlowitz. The board comprises independent committees and committee chairs. The chairman and independent lead director guide the board in fulfilling its responsibilities. In September 2024, PFSI welcomed incoming Board Member Mr. Sunil Chandra. Mr. Chandra, a technology and financial expert, was previously responsible for leading the improvement of OakNorth's AI-powered credit platform's commercial banking credit-underwriting service. We believe Mr. Chandra's hiring will bring improvements to PFSI's customer-facing technology platforms through Artificial Intelligence-related capital expenditures. PFSI's board members include executives from institutional investors that hold majority PFSI shares, such as ST Family Investment Company LLC, GR Family Investments, and MFN Partners Management LP. PFSI's equity-focused incentives plan, executive leadership track record, and total board member ownership of 16.6% (Figure 15) support our positive outlook for PFSI's share price.

Figure 15: Board Ownership

Execs. & Directors	Common Stock Beneficially Owned	Number	%
David Spector		1,519,362	3.00%
Doug Jones		825,345	1.60%
William Chang		70,991	
James Follette		56,473	
Daniel Perotti		451,446	
James Hunt		66,789	
Jonathon S. Jacobson		226,829	
Patrick Kinsella		26,596	
Joseph Mazzella		295,851	
Anne McCallion		244,412	
Farhad Nanji		4,711,781	9.30%
Jeffrey A. Perlowitz		14,606	
Lisa M. Shalett		7,741	
Theodore Tozer		21,634	
Emily Youssouf		33,253	
Total Ownership		8,696,935	16.60%

Source: PFSI Proxy Statement 2024

Figure 16: 5% Stockholders

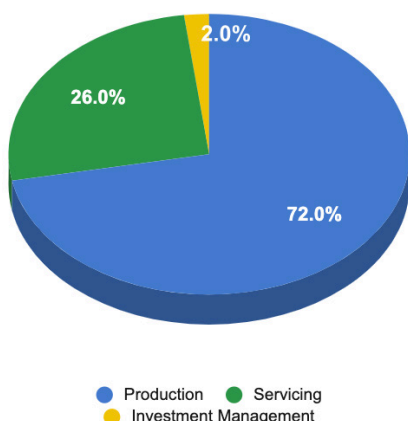
Institutional Investor	Common Stock Beneficially Owned	Number	%
HC Partners LLC		15,741,237	30.90%
T. Rowe Price Investment Management, Inc.		4,912,601	9.70%
MFN Partners, LP		4,531,792	8.90%
Dimensional Fund Advisors LP		2,691,513	8.90%
The Vanguard Group		2,212,174	5.30%

Source: PFSI Proxy Statement 2024

Shareholder Structure: PFSI is majority-owned by institutional investors. As of September 30, 2024, PFSI's largest majority stockholders include some of the largest market capitalization management and financial services firms in the United States (Figure 16). We believe PFSI's institutional-heavy ownership structure is strategically leveraged to maximize shareholder returns.

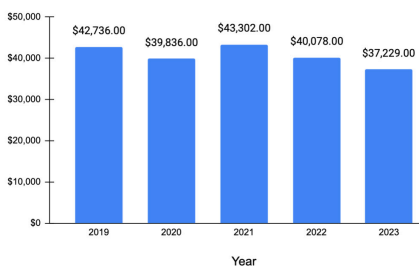
Investment Summary

Figure 17: Revenue Breakdown



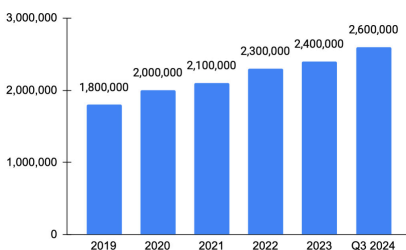
Source: Team Consensus

Figure 18: Investment Management Fees



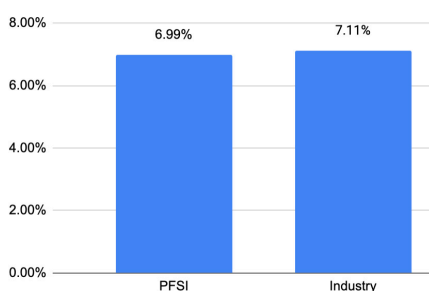
Source: Team Consensus

Figure 19: Total Customers



Source: Team Consensus

Figure 19: 30YR Mortgage Rates



Source: PFSI & The Mortgage Reports

DIVERSIFIED REVENUE AND STRATEGIC PARTNERSHIPS

PFSI's revenue model is underpinned by a diversified portfolio of income streams, including loan origination, servicing, and investment management (Figure 17). This diversification is coupled with robust relationships within the mortgage banking sector and servicing markets, which the company actively nurtures to secure stable, recurring revenue streams. PFSI's ability to maintain high client retention rates contributes to the consistent cash flow generated from its servicing and loan origination operations. This revenue diversification allows each business segment to serve as a hedge against fluctuations in market conditions, providing operational resilience in differing interest rate environments.

For instance, in the first three quarters of 2023, amidst a high interest rate environment, the loan servicing segment accounted for \$545.62 million of PFSI's \$1.01 billion in total revenue. In contrast, during the first three quarters of 2024, as rates eased, the loan origination segment saw a significant uptick, generating \$682.58 million of the \$1.1 billion in total revenue. This counter-cyclical relationship between the two business lines underscores PFSI's ability to deliver stable, predictable revenue, enhancing its financial flexibility and mitigating risk exposure to any single market condition.

Moreover, PFSI benefits from a strategic partnership with PMT, a relationship that offers access to additional revenue streams, capital markets opportunities, and synergistic growth prospects. This symbiotic partnership enables PFSI to leverage both origination and servicing capabilities, positioning the company in an advantageous competitive landscape. Few mortgage companies possess such a complementary relationship with a Real Estate Investment Trust (REIT), with Rocket Mortgage and Annaly Capital Management being one of the few comparable examples. This partnership provides PFSI with additional loan origination opportunities, thereby driving incremental business into its core services, enhancing operational scalability, and amplifying revenue generation potential (Figure 18).

PFSI's diversified revenue model, spanning multiple business lines and benefiting from a synergistic partnership, positions the company for sustained growth and stability. The company's ability to rely on these various sources of income ensures its resilience in navigating economic uncertainty. As a result, PFSI's revenue base remains relatively insulated from market volatility, enabling it to maintain consistent performance and financial strength even in the face of macroeconomic fluctuations.

EXCELLENT CUSTOMER SERVICE AND LOW PRICES

PFSI has garnered a reputation for exceptional customer service, evidenced by consistently high ratings across multiple reputable platforms. For instance, the company earned 4.0 out of 5.0 stars from Forbes Advisor. Similarly, NerdWallet awarded PFSI 4.5 out of 5.0 stars, with customer experience receiving its second-highest rating and mortgage-related rates and fees earning a solid 4.0 out of 5.0 stars (Figure 20).

Additionally, PFSI maintains one of the lowest customer complaint ratios in the industry, at just 0.20 complaints per thousand mortgages, further underscoring its commitment to customer satisfaction.

Enhancing client relationships is integral to retaining and attracting new customers within the mortgage finance industry, especially in light of the 2008 subprime mortgage crisis. Over the last five years, through cultivating a reputation of reliability and transparency, PFSI has minimized customer churn and increased its consumer base from approximately 1.7 million in 2019 to 2.6 million in 2024 (Figure 19).

PSI's strong service has driven enhanced customer retention of 70%, compared to the industry average of 50%, contributing to its organic growth and improved year-over-year market position. Given the company's continued focus on customer experience and satisfaction, we believe PFSI is well-positioned to remain a premier mortgage financial servicing choice.

Figure 20: PFSI Industry Awards



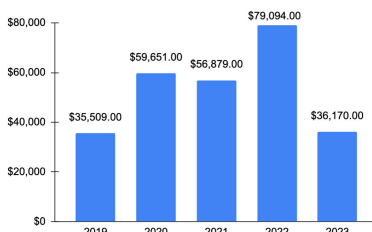
Source: PFSI Annual Report

EXPERIENCED MANAGEMENT AND STRATEGIC RISK MITIGATION

PFSI benefits from an experienced management team with deep industry expertise and a proven track record of effective leadership. This proficiency enables the company to navigate an increasingly volatile economic landscape. Through sophisticated hedging strategies and strategic technological investments, PFSI adeptly mitigates economic and market risks while capitalizing on emerging opportunities. Management’s adaptability to dynamic market conditions is a cornerstone of PFSI’s ability to consistently increase shareholder wealth.

With the Federal Reserve’s consecutive rate cuts in 2024, PFSI experienced declines in its MSR values. However, through proactive risk management and hedging strategies—utilizing interest rate swaps, futures contracts, and other derivatives—PFSI was protected against MSR fair value losses (before realizing cash flow) of \$402.4 million, with hedging gains of \$242.1 million. Additionally, PFSI capitalized on increased refinancing activity, boosting total loan acquisitions and originations by 17 percent, reaching \$31.7 billion in UPB. Management’s ability to effectively hedge against market volatility underscores PFSI’s resilience and adaptability in evolving markets. PFSI aims to increase its hedge ratio from the current 80.0%, which is significantly higher than the 50.0% to 70.0% industry range, to 100% in 2025. This reflects management’s aptitude for anticipating market changes. This disciplined approach positions PFSI to effectively navigate economic shifts, providing the firm with a competitive advantage.

Figure 21: Historical Capex



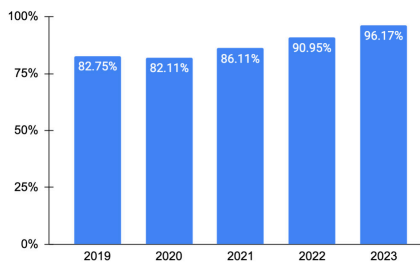
Source: Team Consensus

DRIVING INNOVATION THROUGH DIGITAL TRANSFORMATION

PFSI is making significant strides in digital transformation to enhance operational efficiency and customer engagement. Recent leadership changes, including the promotion of Jim Follette to Chief Digital Officer and Mike Hogan to Chief Information Officer, highlight the company’s commitment to advancing its technological capabilities. Follette and Hogan bring extensive expertise in digital innovation and IT strategy, respectively, aligning with PFSI’s vision to modernize its mortgage processes and improve customer experiences.

Additionally, the appointment of Sunil Chandra, a prominent figure in artificial intelligence, to the board underscores PFSI’s focus on leveraging AI-driven solutions. These initiatives aim to enhance the user interface and drive customer engagement, positioning the company at the forefront of technological innovation within the mortgage sector.

Figure 22: Historical Capex Technological Investment

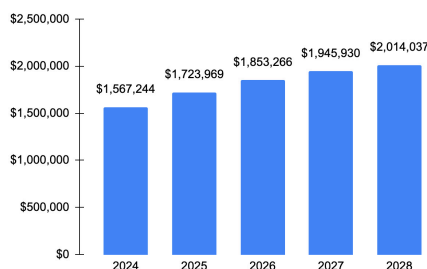


Source: Team Consensus

PFSI’s commitment to digital transformation is evident in its financial statements, with \$27.7 million allocated toward software acquisitions in 2024. Over the past few years, the company has steadily increased its investment in digitization, deploying \$71.9 million and \$31.2 million in 2022 and 2023, respectively, toward software development. These investments are expected to accelerate, particularly in AI-related initiatives, starting in 2025.

Despite relatively modest cash reserves, PFSI’s substantial short-term investments provide ample liquidity to fund its ongoing digital initiatives. While a leading residential mortgage broker praised PFSI for its competitive mortgage rates and transparency, they noted that its digital platform lags behind competitors such as Rocket Mortgage (Appendix 8). Addressing this gap presents a significant opportunity for PFSI to enhance its value proposition and drive future growth.

Figure 23: 5-Year Projected Revenue



Source: Team Consensus

OVERALL POSITIONING

PFSI’s operational efficiency and commitment to exceptional customer service set it apart from competitors. Streamlined processes enhance profitability and improve customer satisfaction, a crucial competitive advantage. PFSI consistently outperforms peers in customer satisfaction metrics, as demonstrated by its historical awards (Figure 20). These strengths, combined with diverse business lines, strategic technology investments, and robust risk management practices, position PFSI for sustained growth and future price appreciation. As outlined in our valuation section, PFSI is well-prepared to navigate market complexities and deliver long-term shareholder value.

Valuation

Figure 24: DCF Present Value

TV Calculation	
Terminal Net Debt-FCF	\$510,357
Terminal Growth Rate	3.5%
Terminal Discount Rate	11.00%
Implied Terminal Multiple	13.80x
TV	\$7,042,927
Present Value Factor	0.68
Present Value of TV	\$4,761,008

Summary of Present Values		
Discrete		
Period Value	\$1,620,690.60	25.40%
TV	\$4,761,007.70	74.60%
Total	\$6,381,698.20	100.00%

Source: Team Consensus

Figure 25: WACC

Capital Component (COC)	Weight	Weighted Cost
Debt (3.97%)	30.00%	1.19%
Equity (14.14%)	70.00%	9.90%
Total		11.09%
Applied		11.00%
Cost of Debt		
Pre-Tax Cost Of Debt		5.51%
Tax Rate		28.00%
Post-Tax Cost Of Debt		3.97%
Cost of Equity		
Beta		1.79x
Market Risk Premium		5.00%
Equity Risk Premium		8.95%
Risk-Free Rate		3.58%
Size Premium		0.61%
Unsystematic Risk Premium		1.00%
Calculated Cost of Equity		14.14%

Source: Team Consensus

Figure 26: Relative Valuation Model

Mortgage Banking Peers	
RKT	
UWMHC	
COOP	
ECPG	
Managed REITS Peers	
TWO	
BXMT	
ARI	
Relative Valuation	
Target P/S	2.44
P/S Implied Price	\$133.94
Upside (Downside)	30.86%

Source: Team Consensus

INTRINSIC VALUATION

We issue a Buy recommendation for PFSI with a 12-month price target of \$123.19, derived using an intrinsic valuation approach, specifically the discounted cash flow (DCF) model. This valuation reflects our anticipation of several favorable factors, including declining interest rates and PFSI's strategic investments in its online platforms and brand recognition, positioning the company for long-term growth.

Discounted Cash Flow Model: Our DCF model employs the Gordon Growth Model and begins with a 5.0% revenue growth rate for FY 2024, reflecting the impact of declining interest rates while accounting for persistent inflationary pressures. Revenue growth is projected to accelerate to 10.0% in FY 2025 as inflation moderates, peaking at 12.5% in FY 2026, before tapering to 7.5% in FY 2027 and stabilizing at a terminal growth rate of 3.5% in FY 2028. This results in a CAGR of 6.6%, a conservative estimate compared to the mortgage industry's projected CAGR of 18.0% through 2030 (Mordor Intelligence). We applied an EBITDA margin of 37.5%, derived from a blend of PFSI's historical average of 34.5% and the market comparable mean of 46.7%. This margin reflects normalization after the adverse effects of interest rate hikes in FY 2022 and FY 2023. For depreciation and amortization (D&A), we estimated a 4.0% expense, slightly below PFSI's historical average, reflecting its service-based business model. We used a 28.0% tax rate, combining the federal corporate tax rate of 21.0% and California's state corporate tax rate of 8.8%, per the IRS and California Franchise Tax Board.

Capital expenditures (CapEx) were estimated at 2.0% of revenue, accounting for ongoing investments in digital transformation. Net working capital (NWC) changes were set at 1.0%, adjusted from historical averages and market comparables. We applied a 3.5% terminal growth rate and an 11.0% discount rate, resulting in an implied multiple of 13.80x. Terminal value was calculated by multiplying the terminal year's net debt-free cash flow by the implied multiple and discounting it using a present value factor of 0.68. Adding the terminal value to the discrete period value yielded a total valuation of \$6.3 billion (Figure 24), equating to a per-share price of \$123.19.

Weighted Average Cost of Capital (WACC): We weighted equity at 70% and debt at 30%, reflecting PFSI's historical capital structure. The cost of debt was based on Moody's Baa rating and a 28.0% tax rate, while the cost of equity utilized a 5-year re-levered beta of 1.79x (Figure 25). This beta aligns with PFSI's performance, which is closely tied to broader economic conditions. For the equity risk premium, we adopted Kroll's recommended 5.0% market risk premium and a 5-year risk-free rate of 3.58%. We also included a 0.61% size premium, based on Kroll's guidance to use the 3rd decile for a larger public company with a history of profitability. Additionally, we incorporated a 1.0% unsystematic risk premium to account for factors such as interest rate risk and key person risk, derived through qualitative analysis. These inputs result in a WACC of 11.0%, which was used as the discount rate in our DCF model.

RELATIVE VALUATION

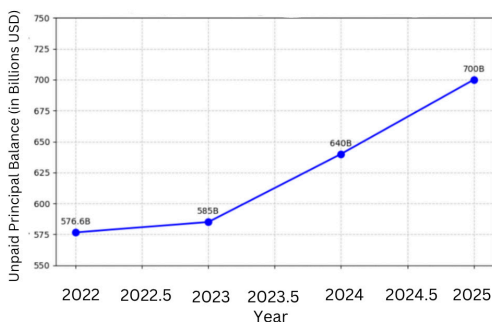
We used the peer group multiples approach to confirm the upside from our Discounted Cash Flow model, resulting in an implied price of **\$133.94**. Our relative valuation was split between two peer groups: Mortgage Banking and managed REITs (Figure 26), comparing the median price per share over the last 5 years within each group. We calculated the overall median P/S multiple for each peer group and weighted each multiple using PFSI's and PMT's market cap. This resulted in a target P/S of 2.44, which led to our implied multiple price and a 30.86% upside. We selected relevant Mortgage Banking competitors with business models and financial structures similar to PFSI, and managed REITs with market caps comparable to PMT. Our implied relative valuation price supports the upside valuation from the Discounted Cash Flow model.

Figure 27: Profitability Analysis

Grade: D	Current	5 Yr Avg	Ind	Mkt
Return on Equity %	4.7	25.8	1.9	33.5
Return on Assets %	0.8	4.0	0.3	15.6
Revenue/Employee \$K	521.5	535.2	—	0.0
Fixed Asset Turns	34.9	28.0	10.4	—
Inventory Turns	—	—*	—	—
Gross Margin %	38.8	56.2	45.3	—
Operating Margin %	17.2	34.7	15.0	—
Net Margin %	7.6	24.2	1.8	21.0
Free Cash Flow/Rev %	—	—	-107.5	—
R&D/Rev %	—	—	—	—

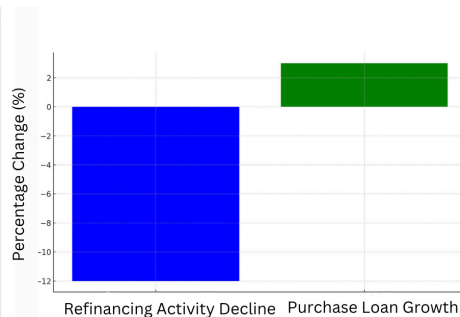
Source: Morningstar

Figure 28: Servicing Footprint



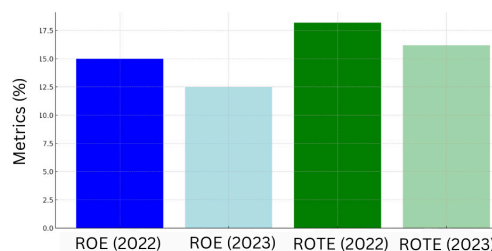
Source: Team Consensus

Figure 29: Loan Origination Performance FY23



Source: Team Consensus

Figure 30: Performance Metrics Comparison (2022 vs. 2023)



Source: Team Consensus

PROFITABILITY ANALYSIS

PSFI's net interest margin (NIM) has experienced challenges due to broader market volatility and macroeconomic shifts. The following factors contribute to ongoing pressures:

Limited Repricing Flexibility for Interest-Bearing Deposits: Interest rates on PSFI's deposits have been at historic lows. With limited room for further decreases, falling market rates are likely to result in tighter NIMs. Historical data shows that the average yield on interest-earning assets has declined in the past two years, driven by an increase in competition and a higher mix of low-rate loans.

Asset Yield Compression: Yield contraction on mortgage portfolios, particularly fixed-rate loans has added to NIM pressure. Additionally, the pricing of newly originated loans reflects tighter spreads as competition intensifies. Over the past fiscal year, PSFI reported a 5% decline in overall asset yields, driven by shifts in the interest rate environment and customer demand for fixed-rate products.

MSR Valuation Challenges: MSRs while a key revenue driver, have been susceptible to valuation adjustments. Rising prepayment rates, combined with fluctuating interest rates, have reduced the hedge effectiveness of MSRs, contributing to periodic income volatility. The fair value of MSRs declined by approximately 7% year-over-year, reflecting the broader market trend (Figure 27).

EARNINGS GROWTH AND EXPENSE MANAGEMENT

PSFI's earnings remain under scrutiny due to rising expenses and slower growth in key segments:

Despite maintaining strong market share, origination volumes have slowed. Fiscal 2023 showed a 12% decline in refinancing activity, partially offset by modest growth in purchase loan originations. Total loan production for the year amounted to \$108 billion, reflecting a more challenging operating environment compared to the prior year (Figure 29). The servicing portfolio expanded to over \$600 billion UPB, delivering consistent fee income. However, delinquency rates edged up slightly, with a 15-basis-point increase reported in the last quarter. PSFI's focus on servicing acquisitions has helped offset some revenue pressures, with new contracts adding \$80 million in annual servicing fees. Operating expenses rose by 8% year-over-year, driven by increased investments in technology and compliance. Specifically, IT spending grew by 15% as the company modernized its digital platforms. Elevated risk and compliance costs, amounting to \$120 million, continue to weigh on operational efficiency. Return on equity (ROE) fell to 12.5% from 15% in the prior year, reflecting a combination of lower margins and higher equity base requirements. Similarly, return on tangible equity (ROTE) dropped to 16.2%, with asset returns declining from 1.05% to 0.92%. While ROE and Return on ROTE experienced declines to 12.5% and 16.2% respectively, these figures remain solid within the context of industry challenges. The company's efforts to reduce the cost-to-income (CTI) ratio, currently at 44.5%, indicate a commitment to improving operational efficiency and profitability (Figure 30).

DUPONT ANALYSIS

3 Step DuPont Approach: A negative net profit margin in the downside case implies a loss or extremely low profitability suggesting insufficient revenue or high costs. In the base and upside scenarios, the company shows strong profitability, with the upside case reflecting particularly high profit generation. The low asset turnover in both the downside and base cases suggests the company is inefficient in utilizing its assets to generate sales. In the upside case, the company uses its assets more effectively, which is reflected in a higher asset turnover ratio. The high financial leverage ratio indicates that the company relies heavily on debt for its operations.

While the ratio decreases slightly in the base and upside scenarios, the company still operates with significant leverage, amplifying both potential returns and risks.

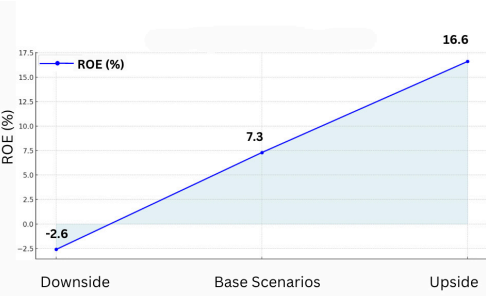
5 Step DuPont Approach: The tax burden remains stable, meaning that taxes are not expected to be a major differentiator in each of the scenarios. The negative interest burden in the downside case suggests that the company faces high interest costs relative to its operating income, pushing it into a loss. In the base and upside cases, the interest burden improves, indicating lower interest expenses or more efficient management of debt. Operating margin improves significantly in the base and upside scenarios, indicating that the company can operate much more efficiently under better conditions. The downside case shows that the company struggles to maintain profitability when market conditions are tough..

In the **downside case**, the negative ROE of -2.6% indicates that the company is in a loss-making position. The low profitability and high interest burden, combined with poor asset utilization, lead to a scenario where the company cannot generate positive returns for its equity holders.

In the **base case**, the ROE of 7.3% reflects moderate profitability and operational efficiency. The company can generate a positive return, but it is constrained by inefficient asset usage and a relatively high reliance on debt. The tax burden and interest burden are manageable in this scenario.

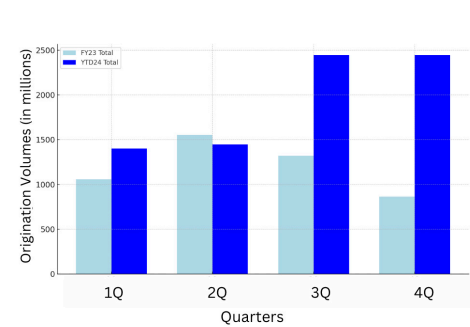
In the **upside case**, the company performs much better, with a high ROE of 16.6%. Improved operating margins and more efficient asset turnover result in stronger profitability, and the interest burden is lower, leading to a significantly higher return on equity (Figure 31).

Figure 31: Return on Equity across Scenarios



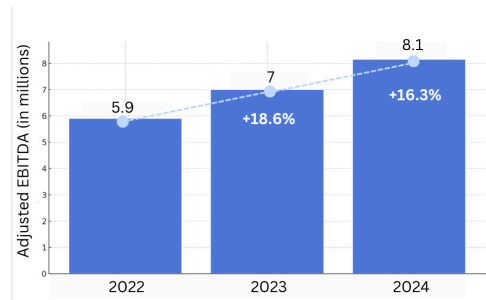
Source: Team Consensus

Figure 32: Consumer Direct Origination Volumes Comparison FY23 & FY24



Source: Team Consensus

Figure 33: Penny Mac Adjusted EBITDA Growth (2022-2024)



Source: Team Consensus

Future Outlook

The launch of an AI-driven underwriting system is expected to enhance efficiency and reduce costs in the loan production process. By 2025, the company anticipates digital initiatives to lower per-loan operational expenses by 10%. Recent acquisitions have positioned PFSI to grow its servicing footprint further, targeting a \$700 billion UPB by 2025. PFSI has increased its focus on growing non-interest income streams, including investment management and ancillary services, which now account for 18% of total revenue. Penny Mac's steady growth in consumer direct origination volumes (Figure 32) signals a strong operational pipeline. They have also strategically enhanced their branding and expanded its consumer direct production to solidify its position in the mortgage industry. In January 2022, the company unveiled a refreshed brand identity, introducing a modern logo and the "Greatness Lives Here" campaign to underscore its commitment to supporting customers throughout their homeownership journey. This rebranding initiative aligns with significant growth in PFSI's consumer direct production volumes. In the third quarter of 2024, the company reported consumer direct interest rate lock commitments (IRLCs) totaling \$5.2 billion in UPB, marking a 93% increase from the previous quarter and a 206% rise from the same period in 2023. We see consistent growth in PFSI's Adjusted EBITDA from 2022 to 2024 (Figure 33), with an 18.6% increase in 2023 and a further 16.3% rise in 2024. The sustained upward trajectory also signals strong operational performance and positions PFSI favorably for continued financial stability and growth in the coming years.

INVESTMENT RISKS

Figure 34: Risk Matrix



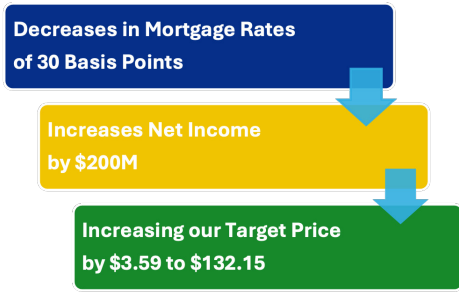
Source: Team Consensus

FIRMS SPECIFIC RISKS

Risk 1: Mortgage Rate Risk (Medium probability, High Risk, Low Impact):

Modeling firm-specific risks associated with decreases in mortgage rates from 2025 onward indicates an increase in total revenue for PFSI's production segment. Fannie Mae's latest forecast expects 30-year mortgage rates to remain elevated in the near term at around 6.60%, gradually dropping to 6.30% by the end of 2025.

Figure 35: Mortgage Risk Sensitivity



Source: Team Consensus

Freddie Mac researchers expect 30-year mortgage rates to remain elevated, around the current 6.85% while experiencing steady declines throughout 2025 (Figure 38).

Impact: Fannie Mae’s bullish projections of a 30 basis point decrease increases Net Income by \$200 million, and our DCF target price from \$128.56 to \$132.15 (Figure 35).

Mitigant: PFSI’s diversified business structure mitigates risks associated with adverse mortgage rate movements. Declines in MSR valuations are effectively managed through robust hedging strategies designed to offset reductions. PFSI also benefits from increased servicing portfolio volume driven by lower rates and increased refinancing, further proving the company’s resilience to market fluctuations.

MARKET AND FINANCIAL RISKS

Figure 36: Interest Rate Risk Sensitivity



Source: Team Consensus

Risk 2: Interest Rate Risk (Low probability, High Risk): Investors bear significant exposure to potential changes in interest rates. With the Federal Reserve expressing pessimism in continued rate cuts, PFSI may see limited refinancing activity and stabilized MSR valuations. The last Federal Reserve meeting saw rates reduced by 25 basis points, to a range of 4.25% - 4.50%. J.P. Morgan researchers estimate reduced cuts in 2025 to only take place once per quarter, leading to a terminal value of 3.5%, versus an earlier terminal forecast of 3.0%.

Impact: Our bull-case analysis factors in a conservative 25 basis point decrease in the Federal Funds rate, throughout 2025. The 25 basis point decrease yields an increase in PFSI’s overall revenue of \$3.95 million, resulting in an subsequent increase in our DCF target price to \$131.15 (Figure 36).

Mitigant: PFSI effectively hedged interest rate risk using derivative assets, with a coverage rate of 80% on its MSR portfolio. Following consecutive decreases in the Federal Funds rate, PFSI experienced \$402.4 million MSR fair value declines, partially offset by hedging gains of \$242,051 in Q3 of 2024. CEO David Specter reports “PMT’s book value per share has remained stable due to its diversified portfolio and disciplined approach to hedging.” The team conducted interviews with executive management which revealed PFSI’s plan to hedge with a 100% coverage ratio in 2025. We believe PFSI’s effective disciplined hedging practices will efficiently mitigate interest rate risks from possible MSRs, MBS and related tax impacts.

Figure 37: Cost of Equity Risk Sensitivity



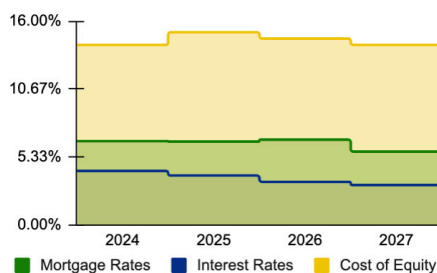
Source: Team Consensus

Risk 3: Inflation (High probability, High Risk): With the incoming government administration, we expect to see various policy changes, including additional tariffs and lower tax rates. We surmise a medium overall probability of increased inflation throughout 2025. An increase in inflation will result in an increase in PFSI’s operating costs, a reduction in residential mortgage origination volume and a subsequent increase in PFSI’s MSR valuations. Rising inflation rates were modeled to increase our overall CAPM, using a 100 basis point cost of equity increase for the upcoming 2025 year (Figure 37).

Impact: Modeling for unexpected increases in inflation, we increased the cost of equity from 14.14% to 15.14%, which reduced our DCF target value to \$116.77. However, even with a 100 basis point inflationary increase to our cost of equity, considering the current price of \$102.35, we still maintain our bullish expectation.

Mitigant: Management sees the growing portfolio of its servicing segment as a buffer against inflation. Specter is credited as saying “We have demonstrated that even in a challenging origination environment, our large servicing portfolio, multi-channel production capabilities and balanced business model have positioned the company well to continue making progress towards achieving its long term goals.” We expect PFSI to adequately manage inflationary risks through the company’s diversified business offerings.

Figure 38: Rate Forecasts



Source: Team Consensus, Statista, Longforecast, CCN

APPENDIX

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APPENDIX 1: GLOSSARY

ACRONYM	Definition	ACRONYM	Definition
AHM	AmeriHome Mortgage Co.	LTSI	Long-term Share Incentives
BOA	Bank of America	NFCU	Navy Federal Credit Union
CB	Citizens Bank	NYSE	New York Stock Exchange
CCM	Crosscountry Mortgage	NZ	Newrez LLC
CIM	Chimera Investment Corporation	PFSI	PennyMac Financial Services, Inc.
CMG	CMG Financial	PHL	Planet Home Lending LLC
COC	Cost of Capital	PMT	PennyMac Mortgage Investment Trust
COOP	Mr. Cooper Group Inc.	PNC	PNC Bank
FCF	Free Cash Flow	PV	Present Value
FFIEC	Federal Financial Institutions Examination Council	RKT	Rocket Companies, Inc.
FIM	Fairway Independent Mortgage	TV	Terminal Value
FLG	Flagstar Financial Inc.	USB	U.S. Bank
GR	Guaranteed Rate Inc.	USBM	U.S. Bank Mortgage
LDI	loanDepot, Inc.	UWMC	United Wholesale Mortgage

APPENDIX 2: CONSOLIDATED INCOME STATEMENT

Form of Statement	Historical		YTD (1)		LTM
	12/31/21	12/31/22	12/31/23	09/30/24	09/30/24
	Audited	Audited	Audited	Unaudited	Unaudited
Time in Period	1 Year	1 Year	1 Year	9 Months	12 Months
Revenue	3,250,566.0	2,014,728.0	1,393,106.0	1,109,365.0	1,471,471.0
Revenue Growth Rate	<i>n/a</i>	-0.4	-0.3	<i>n/a</i>	
Operating Expenses					
Selling, General & Administrative	-1,740,917.0	-1,251,070.0	-1,126,575.0	-777,678.0	-1,035,039.0
Depreciation & Amortization	-67,261.0	-69,438.0	-91,450.0	-74,281.0	-98,373.0
Total Operating Expenses	-1,808,178.0	-1,320,508.0	-1,218,025.0	-851,959.0	-1,133,412.0
Operating Income	1,442,388.0	694,220.0	175,081.0	257,406.0	338,059.0
Interest Income/ (Expense), Net	-90,530.0	-41,365.0	-4,853.0	-8,530.0	-14,089.0
Other Income/ (Expense), Net	7,325.0	12,392.0	13,403.0	22,786.0	28,178.0
Pre-Tax Income (Loss)	1,359,183.0	665,247.0	183,631.0	271,662.0	352,148.0
Tax Provision	-355,693.0	-189,740.0	-38,975.0	-64,728.0	-47,340.0
Net Income (Loss)	1,003,490.0	475,507.0	144,656.0	206,934.0	304,808.0
Other Items:					
EBITDA	1,509,649.00	763,658.00	266,531.00	331,687.00	436,432.00
EBITDA Margin	46.40%	37.90%	19.10%	29.90%	29.70%

APPENDIX 3: CONSOLIDATED BALANCE SHEET

Form of Statement	12/31/21	Historical 12/31/22	12/31/23	09/30/24	Projected 12/31/24
	Audited	Audited	Audited	Unaudited	Forecasted
Assets					
Assets					
Cash & Cash Equivalents	340,069.00	1,328,536.00	938,371.00	145,814.00	147,089.90
Short-term investment at fair value	6,873.00	12,194.00	10,268.00	667,934.00	673,778.40
Principal-only stripped mortgage-backed securities at fair value	-	-	-	960,267.00	968,669.30
Loans held for sale at fair value	9,742,483.00	3,509,300.00	4,420,691.00	6,565,704.00	6,623,153.90
Derivative assets	333,695.00	99,003.00	179,079.00	190,612.00	192,279.90
Servicing advances, net	702,160.00	696,753.00	694,038.00	400,764.00	404,270.70
Mortgage servicing rights at fair value	3,878,078.00	5,953,621.00	7,099,348.00	7,752,292.00	7,820,124.60
Operating lease right-of-use assets	89,040.00	65,866.00	-	-	-
Investment in PennyMac Mortgage Investment Trust at fair value	1,300.00	929	1,121.00	1,070.00	1,079.40
Receivable from PennyMac Investment Trust	40,091.00	36,372.00	29,262.00	32,603.00	32,888.30
Loans eligible for repurchase	3,026,207.00	4,702,103.00	4,889,925.00	5,512,289.00	5,560,521.50
Other assets	616,616.00	417,907.00	582,460.00	642,189.00	647,808.20
Total Assets	18,776,612.00	16,822,584.00	18,844,563.00	22,871,538.00	23,071,664.00
Liabilities & Shareholders' Equity					
Liabilities					
Assets sold under agreements to repurchase	7,292,735.00	3,001,283.00	3,763,956.00	6,600,997.00	6,658,755.70
Mortgage loan participation purchase and sale agreements	479,845.00	287,592.00	446,054.00	517,527.00	522,055.40
Notes payable secured by mortgage servicing assets	1,297,622.00	1,942,646.00	1,873,415.00	1,723,632.00	1,738,713.80
Unsecured senior notes	1,776,219.00	1,779,920.00	2,519,651.00	3,162,239.00	3,189,908.60
Obligations under capital lease	3,489.00	-	-	-	-
Derivative liabilities	22,606.00	21,712.00	53,275.00	41,471.00	41,833.90
Mortgage servicing liabilities at fair value	2,816.00	2,096.00	1,805.00	1,718.00	1,733.00
Account payable and accrued expenses	359,413.00	262,358.00	449,896.00	331,512.00	334,412.70
Operating lease liabilities	110,003.00	85,550.00	-	-	-
Payable to PennyMac Mortgage Investment Trust	228,019.00	205,011.00	208,210.00	81,040.00	81,749.10
Payable to exchanged Private National Mortgage Acceptance Company, LLC	30,530.00	26,099.00	26,099.00	26,099.00	26,327.40
Income taxes payable	685,262.00	1,002,744.00	1,042,886.00	1,105,550.00	1,115,223.60
Liability for loans eligible for repurchase	3,026,207.00	4,702,103.00	4,889,925.00	5,512,289.00	5,560,521.50
Liability for losses under representations and warranties	43,521.00	32,421.00	30,788.00	28,286.00	28,533.50
Total Liabilities	15,358,287.00	13,351,535.00	15,305,960.00	19,132,360.00	19,299,768.20
Stockholders' Equity					
Common Stock	6.0	5.0	5.0	5.0	5.0
Additional Paid in Capital	125,396.00	-	24,287.00	54,415.00	54,891.10
Retained Earnings	3,292,923.00	3,471,044.00	3,514,311.00	3,684,758.00	3,716,999.70
Total Stockholders' Equity	3,418,325.00	3,471,049.00	3,538,603.00	3,739,178.00	3,771,895.80
Total Liabilities & Members' Equity	18,776,612.00	16,822,584.00	18,844,563.00	22,871,538.00	23,071,664.00
Summary					
Total Cash & Cash Equivalents				145,814.00	
Total Debt				11,528,339.00	

APPENDIX 4: PRO-FORMA ASSUMPTIONS

PRO-FORMA ASSUMPTIONS

For the Income Statement, we excluded Interest Income and Interest Expense from the revenue section to provide a more accurate representation of operating performance. Total Net Revenues figure was adjusted by reclassifying interest income and expense into separate line items. No additional adjustments were applied to the income statement.

For the Balance Sheet, the historical balances as of September 30, 2024, were retained without modification. To prepare the forecasted balance sheet as of December 31, 2024, we applied the terminal growth rate of 3.5%, prorated for the remaining three months of the fiscal year. This rate was prorated for the remaining three months of 2024 by dividing the annual growth rate by 12 and multiplying by 3. This adjustment reflects the partial period's impact on the year-end forecast.

APPENDIX 5: DISCOUNTED CASH FLOW MODEL

	12 Months Ending Dec 31				
	2024	2025	2026	2027	2028
Revenue	\$	\$	\$	\$	\$
Revenue	1,567,244.30	1,723,968.70	1,853,266.30	1,945,929.60	2,014,037.20
Total	1,567,244.30	1,723,968.70	1,853,266.30	1,945,929.60	2,014,037.20
% Change	0.13	0.10	0.08	0.05	0.04
Operating Expenses	(979,527.70)	(1,077,480.40)	(1,158,291.50)	(1,216,206.00)	(1,258,773.20)
EBITDA	587,716.60	646,488.30	694,974.90	729,723.60	755,263.90
% Margin	0.38	0.38	0.38	0.38	0.38
Less: Depreciation & Amortizat	3.0%				
	(47,017.30)	(51,719.10)	(55,598.00)	(58,377.90)	(60,421.10)
EBIT	540,699.30	594,769.20	639,376.90	671,345.70	694,842.80
% Margin	0.35	0.35	0.35	0.35	0.35
Taxable Cash Flow	540,699.30	594,769.20	639,376.90	671,345.70	694,842.80
Calculated Taxes	28.0%	(3)	(151,395.80)	(166,535.40)	(179,025.50)
Debt-Free After-Tax Cash Flow	389,303.50	428,233.80	460,351.40	483,368.90	500,286.80
Less: Capital Expenditures	0.5%	(4)	(7,836.20)	(2,750.00)	(1,525.00)
Add: Depreciation & Amortization			47,017.30	51,719.10	55,598.00
Less: Change in Working Capit	2.0%		(31,344.90)	(34,479.40)	(37,065.30)
Net Debt-Free Cash Flow	397,139.70	442,723.50	477,359.00	493,098.60	510,357.00
Partial Period	0.25	1.00	1.00	1.00	1.00
Adjusted Net Debt-Free Cash Flow	100,101.00	442,723.50	477,359.00	493,098.60	510,357.00
Discount Period	0.13	0.75	1.75	2.75	3.75
Discount Factor	11.0%	0.99	0.92	0.83	0.75
Present Value	98,793.00	409,305.20	397,591.20	370,000.60	345,000.60

Terminal Growth Rate

		1.5%	2.5%	3.5%	4.5%	5.5%
Discount Rate	9.0%	6,681,413.90	7,507,261.10	8,633,416.40	10,260,085.10	12,816,278.80
	10.0%	5,913,200.90	6,529,056.60	7,334,406.40	8,432,610.60	10,018,905.60
	11.0%	5,306,749.10	5,780,991.40	6,381,698.20	7,167,238.00	8,238,428.50
	12.0%	4,815,838.20	5,190,388.80	5,653,069.00	6,239,130.50	7,005,518.60
	13.0%	4,410,324.60	4,712,258.70	5,077,757.90	5,529,256.90	6,101,155.60

Sensitivity Analysis:

	Low	High	Concl.
Range of Valuation Indications	5,190,390.00	8,432,610.00	6,381,700.00

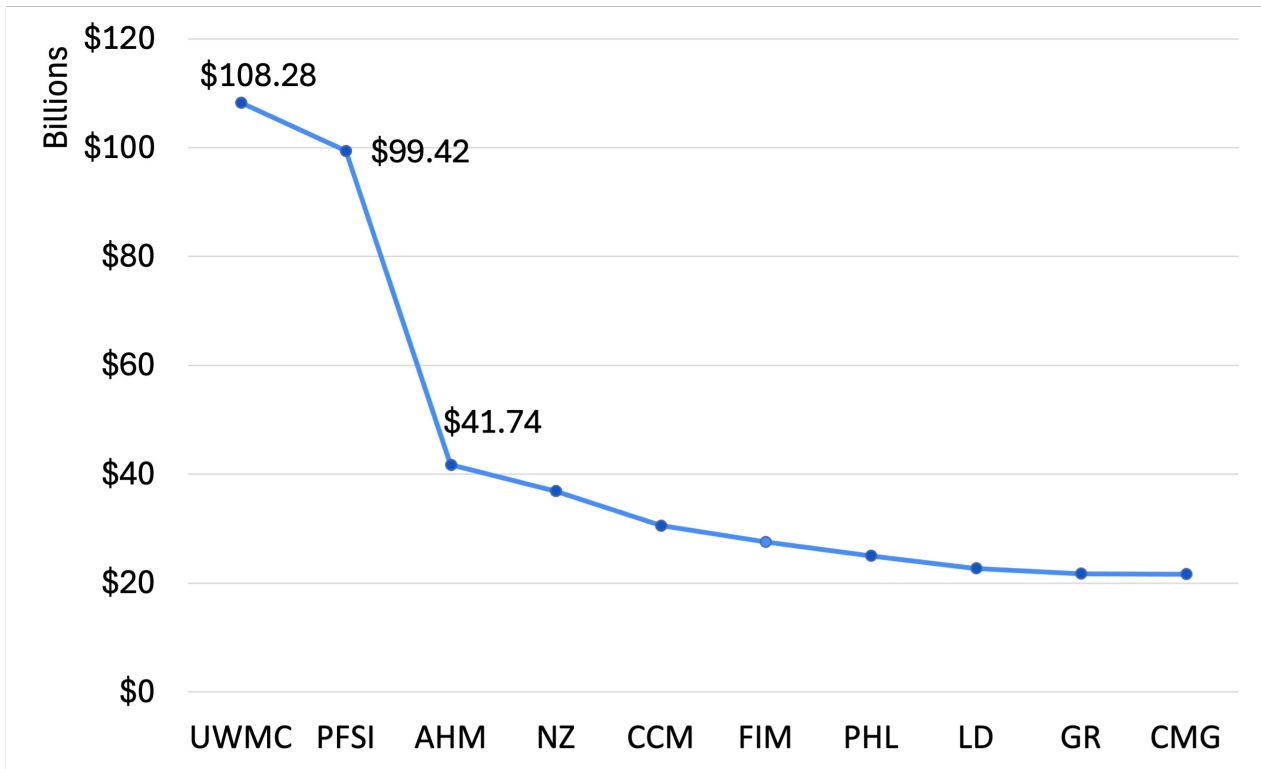
Enterprise Value Indication	Low	High	Concluded	Weighting	Weighted Conclusion
Income Approach					
Discounted Cash Flow	\$5,133,690.60	\$8,347,489.00	\$6,314,521.40	100.00%	\$6,314,521.40
Equity Value					\$6,314,521.40

Allocation of Value

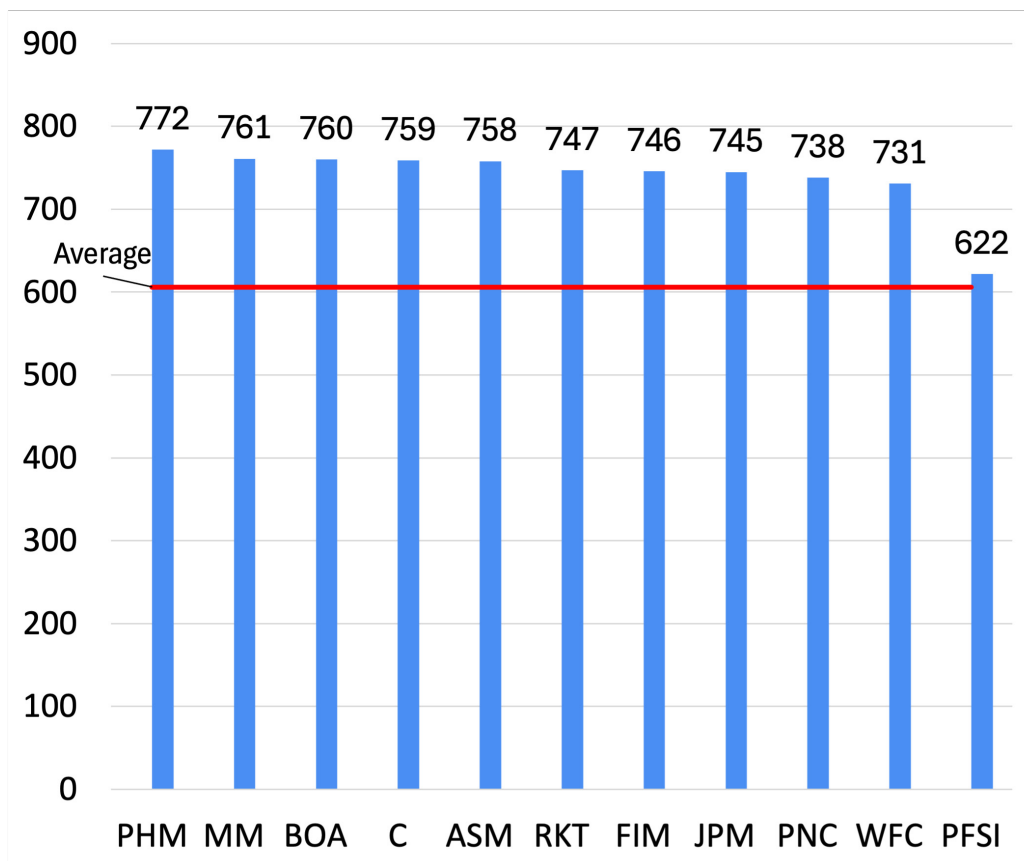
Price Per Share	\$123.19
Shares Outstanding	51,260

APPENDIX 6: INDUSTRY AND COMPETITIVE ANALYSIS

SCOTSMAN GUIDE 2024 TOP OVERALL LENDERS



J.D. POWER 2024 U.S Mortgage Customer Satisfaction Index Rating



APPENDIX 7: GOVERNANCE

PFSI BOARD OF DIRECTORS



David Spector



Jeffrey A. Perlowitz



Farhad Nanji



Joseph F. Mazzella



Doug Jones



Jonathon S. Jacobson



Theodore W. Tozer



Anne D. McCallion



Lisa M. Shalett



Sunil Chandra



Patrick Kinsella

PFSI EXECUTIVE MANAGEMENT

Member	Joined	Tenure	Executive Position	Previous Position
David A. Spector	2012	12	Chairman and Chief Executive Officer	Morgan Stanley Global Residential Mortgages Co-Head
Steven R. Bailey	2010	14	Senior Managing Director and Chief Servicing Officer	Bank of America National Servicing Exec.
James Follette	2011	13	Senior Managing Director and Chief Digital Officer	Countrywide Financial Corp. Managing Director
Susan Hallock Smith	2020	4	Senior Managing Director and Chief Marketing Officer	Capital Group Senior VP
Mike Hogan	2020	4	Senior Managing Director and Chief Information Officer	Bank of America Managing Director
Doug Jones	2021	3	Director President and Chief Mortgage Banking Officer	CountryWide Senior VP
Pamela Marsh	2012	12	Senior Managing Director and Treasurer	OneWestBank Executive VP
Daniel S. Perotti	2021	3	Senior Managing Director and Chief Financial Officer	BlackRock Inc. Head of Quant Research
Jenny Rhodes	2021	3	Senior Managing Director Chief Human Resources Officer	PNC Bank Senior VP
Derek W. Stark	2018	6	Senior Managing Director Chief Legal Officer and Secretary	Countrywide Financial Corp Executive VP
Abbie Tidmore	2022	2	Senior Managing Director and Chief Revenue Officer	Bank of America VP
Don White	2022	2	Senior Managing Director and Chief Risk Officer	Countrywide Financial Corp Executive VP

APPENDIX 8: PRIMARY RESEARCH SUMMARY

MORTGAGE BROKER BRANCH MANAGER INTERVIEW SUMMARY

As part of our primary research, we interviewed a Branch Manager from Atlas Mortgage Group, a mortgage brokerage servicing firm that leverages PennyMac for loan origination. The Branch Manager provided a positive assessment of PFSI, citing the firm's superior customer support and competitive mortgage pricing as key factors in driving business. He emphasized PFSI's strong reputation for operational efficiency and transparent pricing, which positions the company as a preferred partner for brokers in the origination space. However, the Branch Manager also pointed out operational challenges related to PFSI's technological infrastructure, specifically the complexity and user-friendliness of its mortgage portals, which he perceived to be less advanced compared to its competitors. He suggested that strategic enhancements to PFSI's digital platforms could significantly improve user experience, thereby strengthening the company's market position.

PRIMARY RESEARCH REFLECTION

From the conversation, it was clear that while PFSI excels in customer service and pricing efficiency, it faces challenges in the operational aspects of loan origination. This presents a potential growth opportunity for PFSI, as the company looks to enhance its market share through planned improvements, including the integration of artificial intelligence-driven customer service technology and increased investments in technological infrastructure.

APPENDIX 9: DUPONT METHOD

DuPont Return on Equity (ROE)

	Downside	Base	Upside
<u>3-Step DuPont Approach</u>			
Net Profit Margin	(3.9%)	9.0%	17.7%
Total Asset Turnover	0.1x	0.1x	0.2x
Financial Leverage Ratio	5.7x	5.5x	5.4x
Return on Equity (ROE)	(2.6%)	7.3%	16.6%
<u>5-Step DuPont Approach</u>			
Tax Burden	0.8x	0.8x	0.8x
Total Asset Turnover	0.1x	0.1x	0.2x
Financial Leverage Ratio	5.7x	5.5x	5.4x
Interest Burden	(1.0x)	0.6x	0.8x
Operating Margin	5.0%	20.0%	30.0%
Return on Equity (ROE)	(2.6%)	7.3%	16.6%

Source: TIKR Terminal

APPENDIX 10: RELATIVE VALUATION

Peer Group	Market Cap*			TTM P/S	
	LTM \$B	Dec-21	Dec-22	Dec-23	Dec-24
Mortgage Banking					
Rocket Companies, Inc. (RKT)	22.46	2.09	1.93	7.26	5.10
UWM Holdings Corporation (UWMC)	9.38	2.41	2.86	5.41	3.73
Mr. Cooper Group Inc. (COOP)	6.14	0.86	1.03	1.03	3.06
Encore Capital Group, Inc. (ECPG)	1.13	1.20	0.83	0.87	0.85
Median		1.65	1.48	3.22	3.40
Managed Real Estate Investment Trusts					
Two Harbors Investment Corp. (TWO)	1.23	3.12	1.50	1.52	1.45
Blackstone Mortgage Trust Inc. (BXMT)	3.00	6.55	3.35	1.89	1.64
Apollo Commercial Real Estate Finance, Inc. (ARI)	1.20	4.35	3.10	2.19	1.48
Median		4.35	3.10	1.89	1.48
PFSI	5.24				
PMT	1.09				

	Multiples
Mortgage Banking Median	2.43
Managed REITS Median	2.50
PFSI Weight	82.78%
PMT Weight	17.22%
PFSI Target P/S	2.44
Forecasted Sales/Share	54.82
Implied Price	\$133.94

*As of December 31, 2024

Source: YahooFinance, FinanceCharts

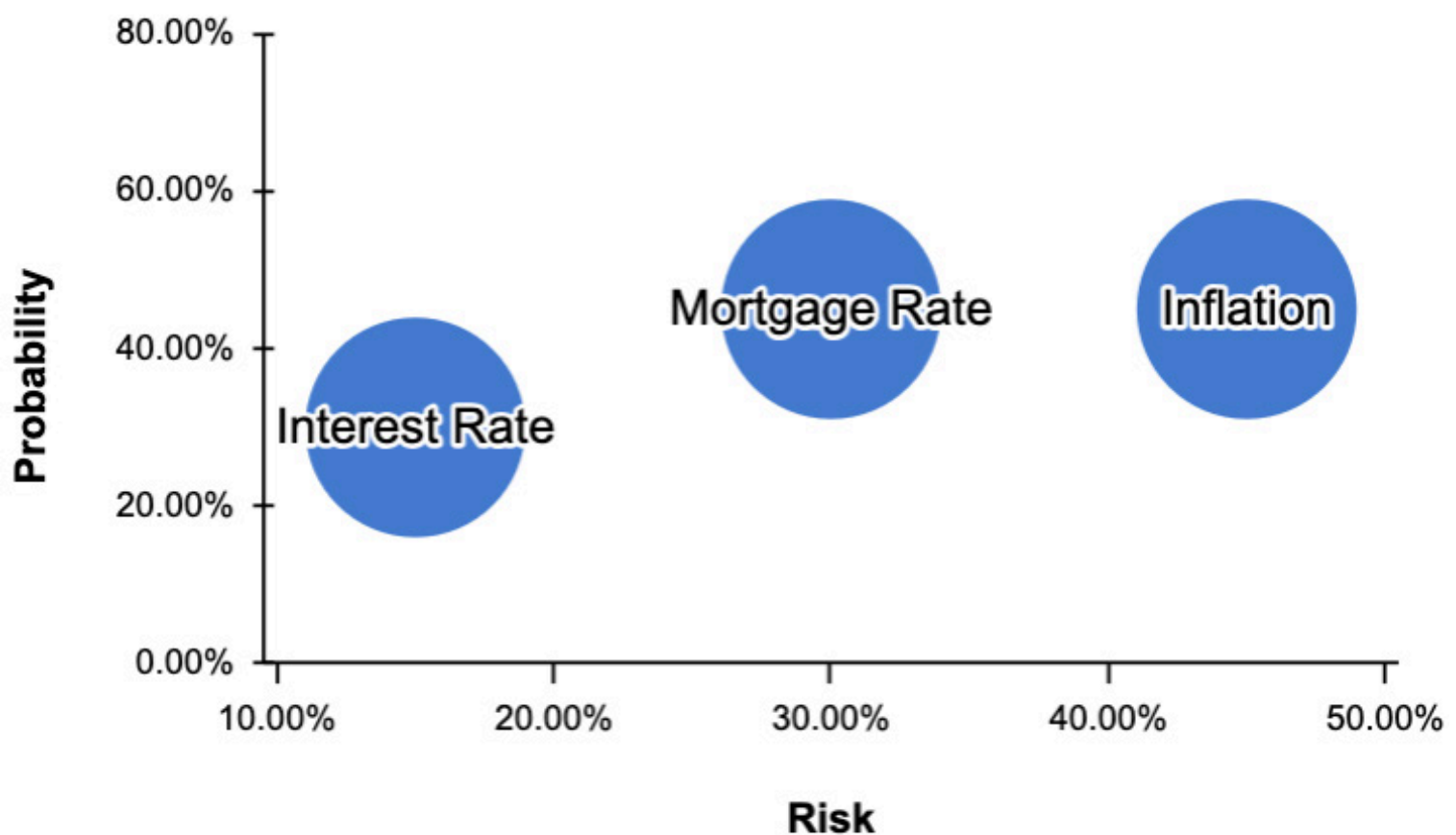
APPENDIX 11: RISK SENSITIVITY ANALYSIS

Basis Point Rate Change	Net Income (\$M)	Revenue (\$M)	Price Movement
Mortgage Rate 30bp decrease	\$200		\$1.76
Interest Rate 25bp decrease		\$3.95	\$0.09
Cost of Equity 100bp increase			-\$14.29

Basis Point Rate Change	Net Income (\$M)	Price Movement	Target Price
30bp Mortgage Rate Decrease	\$200.00	\$1.76	\$130.98

Basis Point Rate Change	Revenue (\$M)	Price Movement	Target Price
Interest Rate 25bp decrease	\$3.95	\$0.09	\$129.31

Basis Point Rate Change	Price Movement	Target Price
Cost of Equity 100bp increase	-\$14.29	\$114.93



APPENDIX 12: REFERENCES

REFERENCE 1: Pennymac 2023 ESG Report

REFERENCE 2: PennyMac 10K Report

REFERENCE 3: PennyMac 10Q Report

REFERENCE 4: PennyMac Proxy Statement

REFERENCE 5: PennyMac Annual Report

REFERENCE 6: DCF.FM

REFERENCE 7: S&P Global

REFERENCE 8: SustainAnalytics