



MORTGAGE BANKERS ASSOCIATION

How do Mortgage Revenues, Costs and Profitability Vary by Loan Balance? An Analysis Using Benchmarking Data

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Section 1: Introduction

In recent years, housing inventory constraints and home price appreciation have resulted in rising average loan balances for single-family homeownership. Yet financing lower balance loans is an essential way for the mortgage industry to facilitate access to affordable, lower valued homes.

Despite lower balance loans' fundamental role in housing finance, a slew of headlines has pointed to their decline. For example, a CNBC headline from May 2022 writes that, "Banks and financial institutions aren't issuing enough small-dollar mortgages that help families with modest incomes to purchase a property."² The decline has also impacted the refinance market (Brevoort, 2022),³ and the fear is that the situation will drive some potential creditworthy mortgagors to "riskier, higher-cost alternative financing options, such as rent-to-own, contract for deed, and other seller-financing arrangements as well as personal property loans for manufactured homes."⁴

In a response to Federal Housing Administration's Request for Information (RFI), MBA cited cost barriers and regulatory barriers as the primary reasons for the dearth in small-dollar lending.⁵ The cost barrier argument – the focus of this paper – suggests that the revenues garnered through origination and servicing of lower balance loans do not justify the costs, or as characterized in the CNBC article, "it's just not as profitable for lenders to do them."⁶

For originations, MBA's RFI response sums the cost situation up, "As a lender considers originating a small balance mortgage, they are aware not only that their upfront profit margin will be thin, but the loan will, additionally,

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² See [How the lack of small-dollar mortgages hurts homeownership in the U.S. \(cnbc.com\)](https://www.cnbc.com/2022/05/12/how-the-lack-of-small-dollar-mortgages-hurts-homeownership-in-the-u.s.-cnbc.com).

³ Brevoort, Kenneth (2022). "Do Low Balance Mortgage Balances Limit Refinancing Opportunities?" Federal Reserve Board. Available at [Do Low Mortgage Balances Limit Refinancing Opportunities? by Kenneth P. Brevoort :: SSRN](https://www.federalreserve.gov/econres/bankers/20220915do-low-balance-mortgage-balances-limit-refinancing-opportunities-by-kenneth-p-brevoort-ssrn).

⁴ See <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/09/11/small-mortgages-are-hard-to-get-even-where-home-prices-are-low>.

⁵ See MBA's December 2022 letter in response to FHA's RFI regarding small mortgage lending. Available at: <https://www.mba.org/industry-resources/resource/mba-letter-to-fha-on-small-mortgage-lending-rfi>.

⁶ See Janneke Ratcliffe's quote in: [How the lack of small-dollar mortgages hurts homeownership in the U.S. \(cnbc.com\)](https://www.cnbc.com/2022/05/12/how-the-lack-of-small-dollar-mortgages-hurts-homeownership-in-the-u.s.-cnbc.com).

produce a lower gain on sale.”⁷ Similarly, for mortgage servicing, the yield from the fixed servicing fee is much less on a small mortgage balance yet the cost to service does not change on a proportionate basis relative to the servicing revenues per loan.

But how much does loan size impact lender and servicer profitability and what components of revenues and costs are affected by loan size?

Using multiple MBA proprietary benchmarking data sources, we can examine the impact of loan size on production and servicing profitability. These data give us unique insights into lender-level revenues and costs compared to average loan balances for these lenders. Moreover, since we have data for multiple years, we can compare revenues and costs for years under differing market and economic conditions.

We acknowledge that our analysis is limited to periodic financial reporting at the lender/servicer level. We are unable to examine revenues and costs at the loan level, and we thus focus on the relationships between these financial results and the average loan size by lender. Loan-level data, for example from a mortgage loan origination system, could conceivably allow us to track costs of production and servicing processes at a more granular level.

We further acknowledge that there are several reasons why average loan size could vary across lenders. First, lenders may specialize in different market segments. Some lenders may concentrate on first-time homebuyers while others focus on jumbo loans. Second, lenders have different geographic footprints. We know that lender costs and revenues vary geographically due to different job markets and wage rates for mortgage personnel. Even two national lenders may have different average loan sizes if their geographic mix is different. To test this, in addition to examining the relationships between financial results and the average loan size by lender, we perform empirical analyses to verify the relationships are evident even after controlling for other relevant variables.

In the next section, we analyze mortgage production revenues, costs, and net income on a simple average basis. The section starts with highlights of our findings. It then describes the data sources and provides detailed results. The third section describes our analysis for mortgage servicing in a similar format. We conclude the paper with a short discussion.

Section 2: Mortgage Production Revenues, Costs, and Net Income

Highlights

- In a strong, refi-dominated mortgage market such as 2021, production revenues per loan typically increase as loan balances increase. Per-loan production expenses – sales, non-sales (fulfillment), production support, and other costs – increase as loan balances rise, but production revenue increases more quickly as loan balances go up. As a result, net production income per loan generally increases as loan balances rise, since the revenue gains outweigh the cost gains.
- In a weaker, purchase-dominated mortgage market such as 2022, production revenues per loan still tend to increase as loan balances increase, but production costs show mixed patterns. Companies with comparatively low loan balances have the lowest production costs, which minimizes net production losses compared to some higher balance lenders. Meanwhile, companies with the highest loan balances (over \$560,000 in 2022) have the highest costs and experienced the largest net production losses.

⁷ The higher relative costs translate into a higher annual percentage rate (APR). According to the aforementioned HUD report ([Financing Lower-Priced Homes: Small Mortgage Loans | HUD USER](#)), the median APR for 30-year mortgage loans on lower-priced homes between 2018 and 2020 was 107 basis points over the average prime offer rate, compared with 26 basis points above prime for more expensive homes.

- Still, there is imperfect trending in net profits comparing low balance to high balance companies, as evidenced by results from MBA's Annual Performance Report. Other factors besides the average loan balance likely come into play to affect revenues and costs: product mix, geography, sales approach, risk appetite, and corporate structure, among others.
- Through mortgage cycles, companies with the highest loan balances (averaging over \$560,000 in 2022) seem to experience the highest highs for net production profits in a strong market, but the lowest lows in weaker markets, according to MBA and STRATMOR's Peer Group Roundtable data.

Data Sources

We analyze our benchmarking data in several ways: by data source and by production year, with 2021 representing a relatively strong year for mortgage originations, and 2022 representing a relatively weak year for mortgage originations.

MBA collects data on production revenues, expenses, and overall profitability through two primary sources:

1. The MBA and STRATMOR Peer Group Roundtable Program (PGR). For the 2021 PGR data, 88 companies – from large banks, large independents, community banks, credit unions, and mid-size independents – are included and divided into quintiles, each with 17 or 18 companies, based on average loan balance at the time of origination. For the 2022 PGR, the 58 companies included in the data are divided into quintiles, each with 11 or 12 companies, based on average loan balance at origination. The average production volume for this sample is about \$9.6 billion per company in 2021 and about \$5.7 billion per company in 2022. Note that only Retail Channel production revenues and expenses are analyzed, with no third-party originations (Broker Wholesale; Correspondent) or Consumer Direct (call center) originations.
2. MBA's Annual Performance Reports. This sample is comprised solely of independent mortgage companies and a relatively few subsidiaries of banks. The sample size is larger than the PGR data at 161 companies in 2021 and 136 companies in 2022. Unlike the PGR data, the samples are not divided evenly into groups but instead organized based on certain consistent loan balance thresholds: less than \$250,000; \$250,000-\$300,000; \$300,000-\$350,000, and greater than \$350,000. The average production volume for this sample is substantially lower than the PGR dataset at about \$2.7 billion per company in 2021 and \$2.2 billion per company in 2022. While most of the companies are Retail Channel-only companies, some Consumer Direct (call center) originations volume and net income is included. No companies with third-party originations (Broker Wholesale; Correspondent) are part of the analysis.

What is Included in Production Revenues, Expenses, and Net Production Income?

Peer Group Roundtables Program (PGR)

Revenues include all fees, gain on sale (including servicing value) and net warehouse spread. The direct expenses include all expenses incurred from the point of sale through closing and funding. Direct costs are divided between 1) sales costs such as commissions, salary, benefits, bonuses, marketing costs, other sales costs for loan officers, loan officer assistants, non-producing branch managers, regional sales managers, and directors, etc., and 2) fulfillment costs to include salaries, benefits, bonuses, and other expenses for processing, underwriting, and closing a loan.

In addition to direct expenses, there are also allocated production support expenses that include post-closing shipping and delivery; secondary; quality control; production technology; and other support. There are also allocated corporate administration costs that include areas such as executive management, finance and accounting, human resources, compliance/risk/legal, parent allocation, and technology support. To calculate net production income, we take all the production revenues less the fully loaded production costs and divide by either production volume in dollars or loan count to get basis point and per-loan figures, respectively.

Because community banks, credit unions, and other banks tend to hold loans in portfolio (held for investment on their balance sheet), they do not generate a secondary marketing gain on sale or a mortgage servicing right. Thus, for apples-to-apples comparisons, we ask that depositories impute secondary marketing gain and mortgage servicing rights to ensure apples-to-apples comparison with independent mortgage companies that do not hold loans in portfolio. Note that this guidance is not in accordance with Generally accepted accounting principles (GAAP) but is necessary to effectively benchmark independent mortgage companies with banks.

Annual Performance Report Data (APR)

Based on the Mortgage Bankers Financial Reporting Form (“MBFRF”) that non-depository Fannie/Freddie seller/servicers and Ginnie Mae issuers are required to complete on a quarterly basis, the data is submitted in accordance with GAAP. While revenues are similar to PGR, there is no imputing of secondary marketing gains or mortgage servicing rights, since independent mortgage companies rarely hold loans in portfolio. In addition, production expenses are presented differently for this analysis (based on the limitations of the MBFRF), with personnel costs divided between sales and non-sales (fulfillment, production support) and all other production costs grouping together to arrive at total production expenses.

PGR Sample: Production Revenues, Costs, and Overall Profits Relative to Loan Balances

Net production income differed based on the loan balance quintile as well as origination year, with 2021 representing a strong year for the industry and 2022 representing a weaker year. In Charts 1 and 2, production revenues, expenses, and net production income are displayed in dollars per loan for these respective years.

In 2021 – a strong year for mortgage originations – total production revenues generally charted upward, with the highest balance quintile generating the highest revenue in per-loan terms. The opposite is true in terms of basis points, but as the saying goes, “You don’t put basis points in the bank”. For example, the highest loan balance group generated \$16,078 in revenues per loan, or 339 basis points, while the lowest balance group generated \$9,733 per loan, or 411 basis points. Revenues for the highest loan balance quintile were \$6,300 per loan more (but 72 basis points less) than the lowest balance group.

Regarding production expenses, costs in basis points generally trended downward, with lower balance quintiles having higher expenses than higher balance quintiles. Once converted to dollars per loan, expenses somewhat flattened out between groups, with the lowest balance quintile showing the lowest costs. Still, the production cost savings among the smaller loan balance groups were not enough to reach the net production profits enjoyed by the larger loan balance groups – either in basis points or dollars per loan. Altogether, the full sample generated net production profits of 107 basis points, or \$3,673 per loan, with the highest quintile posting profits well above the average at 120 basis points or \$5,687 per loan.

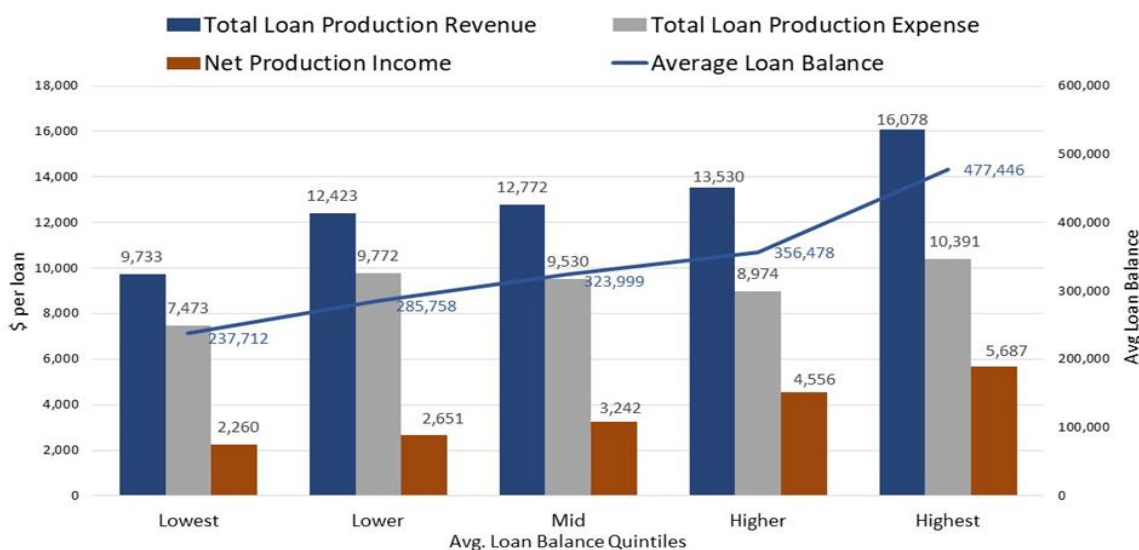
For comparison purposes, we conducted the same analysis during a weaker origination year – 2022 (Chart 2) – in which the total PGR sample averaged Retail Net Production **Losses** of 41 basis points, or \$1,745 per loan. With the inclusion of both depositories and non-depositories, there was no clear “winner” for net profits as all five groups posted net losses. However, the group with the highest loan balances clearly performed the worst, and production profits generally got progressively worse as average loan balances rose. (Were it not for builder affiliates and builder JV companies, the “higher” loan balance quintile would have had an average loss of \$2,042 per loan instead of \$203 per loan. See the dashed column in Chart 2).

Several factors help explain the most substantial loss in the highest quintile. First, the companies in the highest quintile were primarily large banks, community banks, and credit unions – those originating the most jumbo product compared to the other groups. Some of these depositories have been known to operate at a more substantial net production loss, considering other business lines of the bank and the desire to serve existing bank customers. Banks can also hold loans in portfolio, generating net interest margin that is excluded from this mortgage banking

benchmarking study to have apples-to-apples comparisons with independent mortgage companies. Since jumbo products are more likely to prepay in lower interest rate environments, depositories may have imputed secondary and servicing values more conservatively due to the higher rate environment that characterized the situation in 2022. At the same time, with fewer loans coming through the door and lack of refinancings in a purchase market, production costs ballooned to a larger extent than the other peer groups, even as these costs were the lowest in basis points.⁸

Since 2022 could be considered unusual, given the sheer number of interest rate increases and the speed with which the mortgage market changed, we include another year of data to show the trending is not unique to 2022. Chart 3 shows the revenues, costs, and net production profits for 2018 compared to the average loan balances. Like 2022, 2018 was a downcycle year with weaker originations. The difficulty in controlling costs for the highest loan balance group is apparent. While the costs to originate range between \$7,900-\$10,200 per loan for the other groups, the costs for the highest quintile reach almost \$14,000 per loan without a commensurate pickup in revenues that we see for the highest quintile in a strong year such as 2021.

Chart 1 (Strong Mortgage Market)
2021 Retail Production Revenues, Expenses and Net Production Income (\$ per loan) vs. Avg. Loan Balance

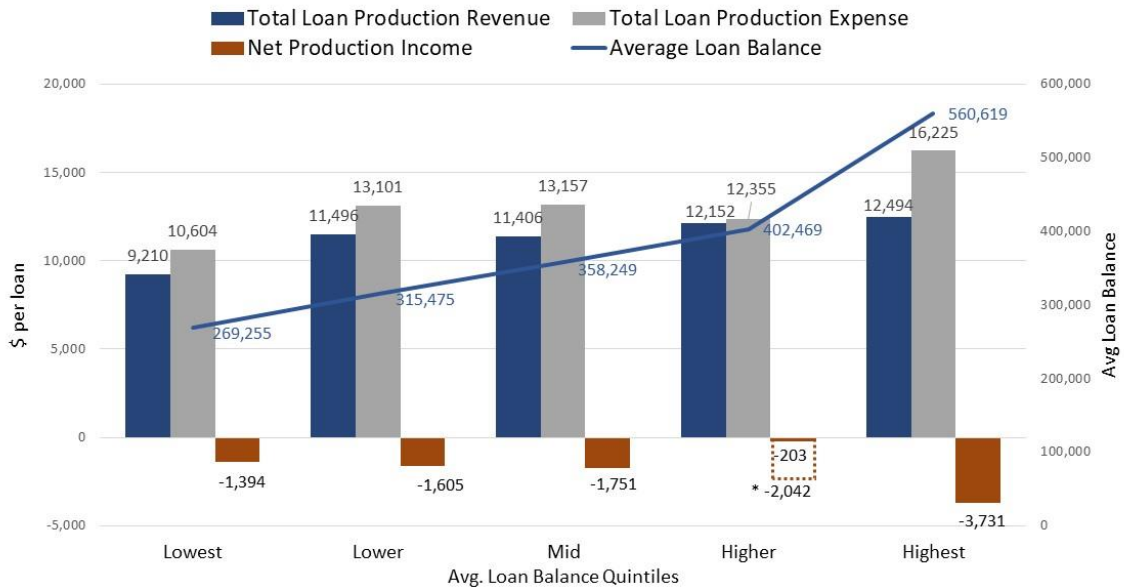


Source: MBA and STRATMOR Peer Group Roundtables Program (PGR)

⁸ As mentioned in the introduction, it is important to analyze the effect of changing loan size on loan origination costs, revenues, and net revenues while controlling for other variables. To this end, we specified regressions for costs, revenues, and net revenues. Note that we ran multiple specifications, and details of all regression output are available from the authors upon request. The bottom line is that the regression analysis corroborates the findings in the main text. To provide some additional color, we detail one of the regression specifications. Using the combined 2021 and 2022 PGR lender level data on retail originations (146 observations) we ran the average cost to originate a loan (dependent variable) on the following independent variables: a year indicator, government production (percent of total lender origination count), purchase loan production (percent of total lender origination count), average FICO at origination, average lender loan balance, average loan to value ratio, loans over 80% LTV (percent of total lender origination count), QM loan production (percent of total lender origination count), principal residence (percent of total lender origination count), retail loan volume, geography (four Census defined regions, percent of total lender origination count in each region), deposit bank indicator (versus independent). The regression output shows that, other things equal, as the loan balance increases by \$1, the cost to originate increases by 2.381 cents (or, for a \$100,000 increase in loan balance, the cost to originate increases by \$2,381). P-value < 0.001. Other interesting findings include that the cost to originate a loan in 2022 was \$2,074 higher than in 2021 other things equal, and banks have a \$1,602 lower origination cost per loan than independents, other things equal. (Note the adjusted R² for this specification was 0.66).

Chart 2 (Weaker Mortgage Market)

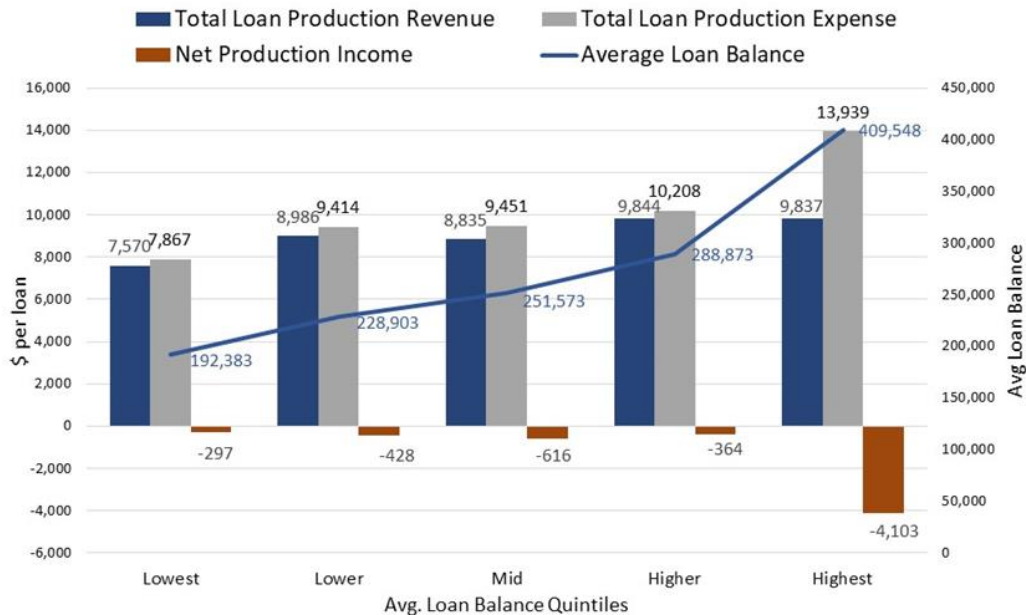
2022 Retail Production Revenues, Expenses and Net Production Income (\$ per loan) vs. Average Loan Balance



*Net Production Income excluding builder affiliates and builder JVs
 Source: MBA and STRATMOR Peer Group Roundtables Program (PGR)

Chart 3 (Weaker Mortgage Market)

2018 Retail Production Revenues, Expenses and Net Production Income (\$ per Loan) vs. Average Loan Balance



Source: MBA and STRATMOR Peer Group Roundtables Program (PGR)

PGR Sample: Production Cost Components and Fixed vs. Variable Costs

One oft-heard theory is that the relatively higher fixed production costs for low balance loans are the main reason why lenders prefer originating higher balance loans compared to lower balance loans. To test this theory, we

separated variable costs – primarily sales expenses that include variable loan officer commissions (paid as a percentage of the loan amount in most cases) – from fixed costs, including processing, underwriting, and closing costs, as well as production support and corporate costs that are generally not tied to the loan amount.

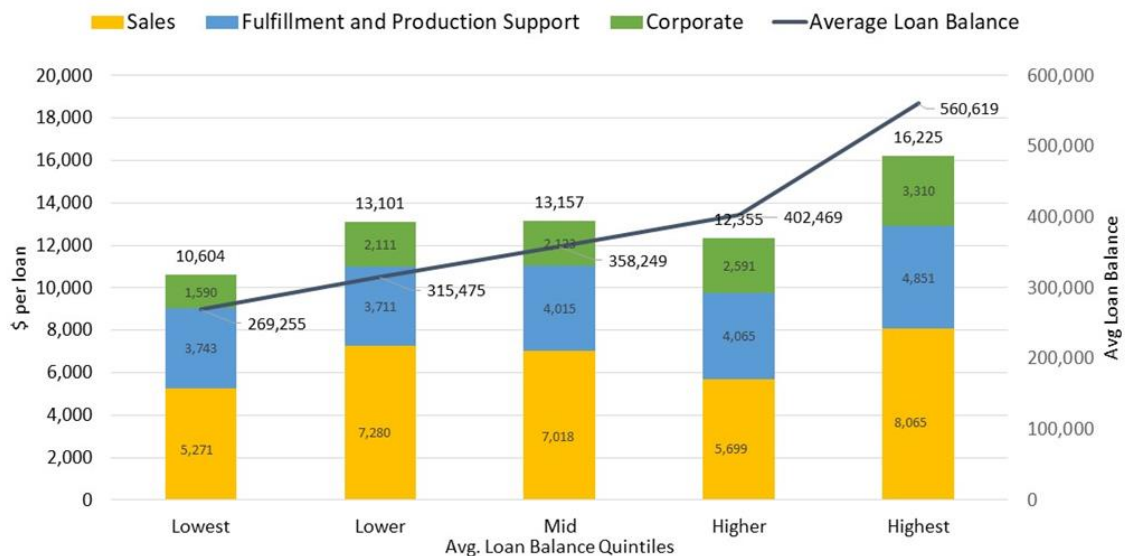
As shown in Charts 4 and 5, lenders who originated the lowest balance loans not only had lower sales costs, but also lower combined fulfillment, production support and corporate costs per loan in both 2021 and 2022. In other words, it was less a matter of the lowest quintile having cost disadvantages in these years; rather, the lowest quintile had incremental cost advantages that were not enough to make up for revenue disadvantages in a strong year like 2021. At the same time, the incremental cost advantages of the lowest balance group minimized overall net production losses compared to other higher balance groups in weaker years like 2022 and 2018.

Chart 4: 2021 Retail Production Cost Components (\$ per loan)



Source: MBA and STRATMOR Peer Group Roundtables Program (PGR)

Chart 5: 2022 Retail Production Cost Components (\$ per loan)



Source: MBA and STRATMOR Peer Group Roundtables Program (PGR)

Annual Performance Report Sample: Production Revenues, Expenses and Overall Profits Relative to Loan Balances

Turning to another MBA data source, the Annual Performance Report (APR) includes production revenues, expenses, net production income and other data for non-depositories who are Fannie/Freddie seller/servicers and/or Ginnie Mae issuers. Unlike the PGR, the income statement is in accordance with GAAP as there is no imputing of secondary marketing income or mortgage servicing rights for loans held for investment.

For this sample, the average loan balance was \$296,326 in 2021 and \$323,394 in 2022, compared to an average loan balance of \$335,795 in 2021 and \$384,277 in 2022 for the total PGR sample. The APR groups also have smaller loan balances than the PGR sample, with the lowest balance group averaging \$211,583 in 2021 and \$209,118 in 2022.

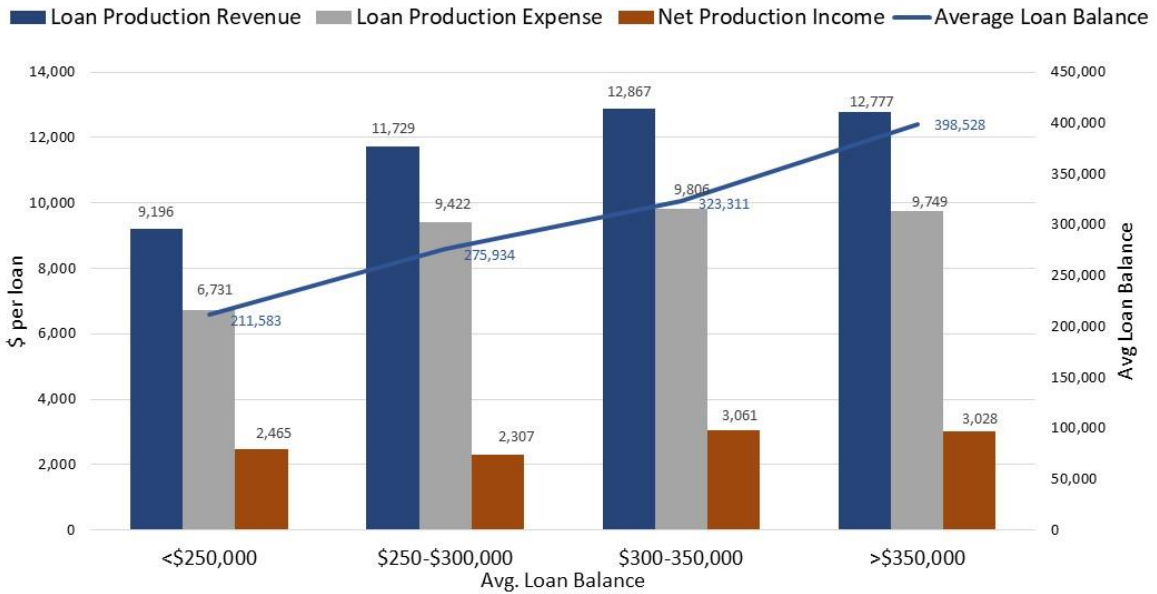
In this sample, we see similar trending in revenues and expenses as the PGR sample as demonstrated in Chart 6, representing data from 2021 – a strong originations year. But there are differences. Altogether, the full sample for the APR generated net production profits of 94 basis points in 2021, or \$2,696 per loan, which are lower than the PGR sample. Furthermore, the two lowest balance groups (with a cut-off of \$300,000) have very similar net profits, as do the two highest balance groups (over \$300,000). The granularity of incremental revenue and expense increases from one lower balance group to the next higher is less apparent, although there is certainly a profit advantage to having higher balance loans greater than \$300,000.

The APR data for 2022 – a weak originations year – is difficult to interpret (Chart 7). In the APR dataset, the highest balance group posted better results in 2022 – in fact the highest net production income of any group for that year, compared to the weakest results of any group in the PGR sample. Possible explanations include variables beyond loan balances – the purchase share (vs. refinancing), the possible focus on strong builder and realtor relationships, and the lack of jumbo product among the independent mortgage bankers in this sample. Note, too, that the average loan balance of the highest group (companies with average loan balance of over \$350,000) in the APR sample was only \$407,303 in 2022, compared to the average balance of \$560,619 in the PGR sample.

Another difference between the two datasets is the flatter net production income among the three lower loan balance groups for the APR sample. Despite differences in revenues and cost, the three groups that averaged less than \$350,000 in average loan balances end up at about the same profits per loan in both years: 2021 and 2022.

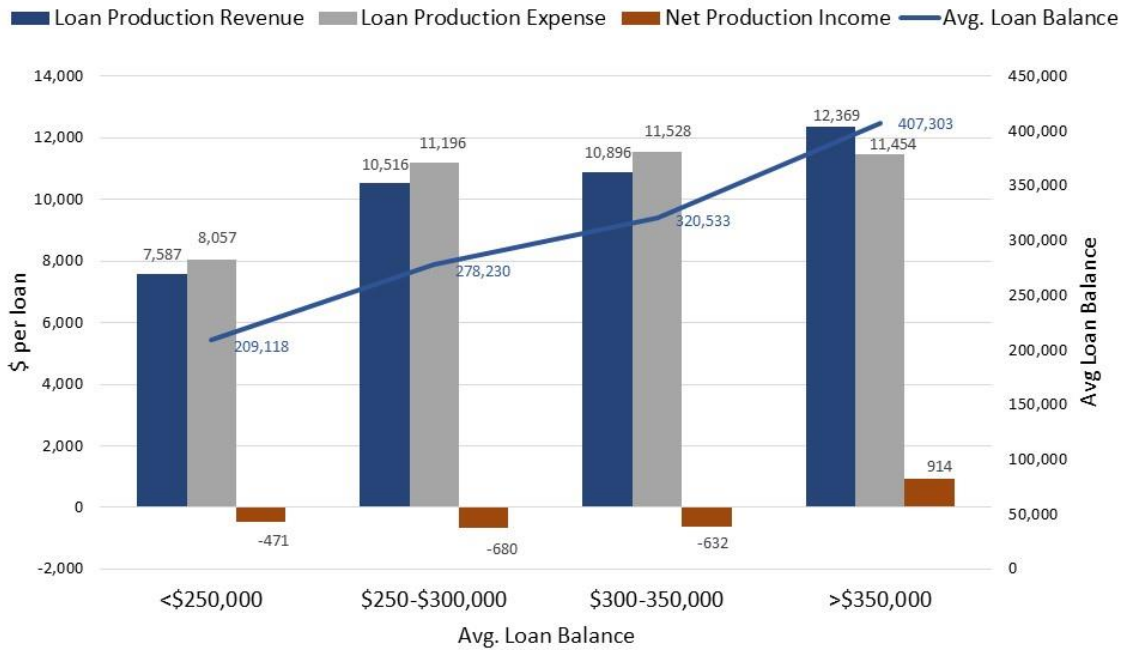
A final difference between the APR and PGR samples is the higher production revenues and costs for the PGR sample, compared to the APR sample. In 2022 for the PGR total sample, average revenues were \$11,386 per loan (311 basis points) and average expenses were \$13,131 per loan (351 basis points). In 2022 for the total APR sample, average revenues were \$10,815 per loan (342 basis points) and average costs were \$10,878 per loan (348 basis points).

Chart 6: 2021 IMB-Only Production Revenue, Expense and Pre-tax Net Production Income



Source: MBA’s Annual Performance Report for Independent Mortgage Companies and Subs of Banks

Chart 7: 2022 IMB-Only Production Revenue, Expense and Pre-Tax Net Production Income



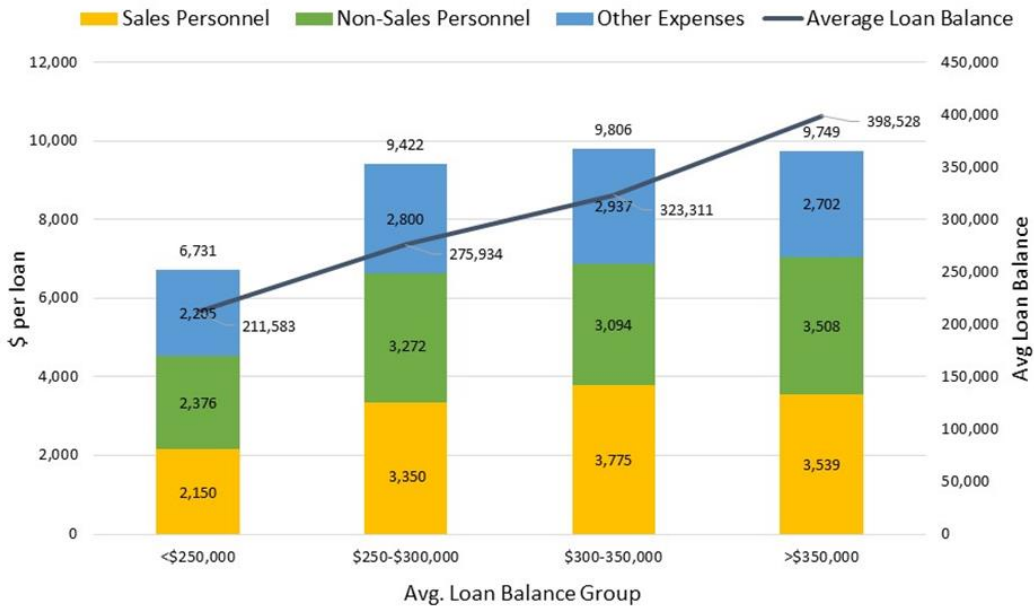
Source: MBA’s Annual Performance Report for Independent Mortgage Companies and Subs of Banks

Annual Performance Report Sample: Production Cost Components

While per-loan revenues generally were higher for higher balance loans across cycles in the APR sample, there wasn’t clear trending for production expenses except when comparing the lowest balance peer group to the other groups. In Charts 8 and 9, the breakdown of costs between sales and non-sales is shown for 2021 and 2022, respectively. In dollars per loan, sales and non-sales costs were smallest for the lowest balance group vs. the other groups (with opposite cost trending in basis points).

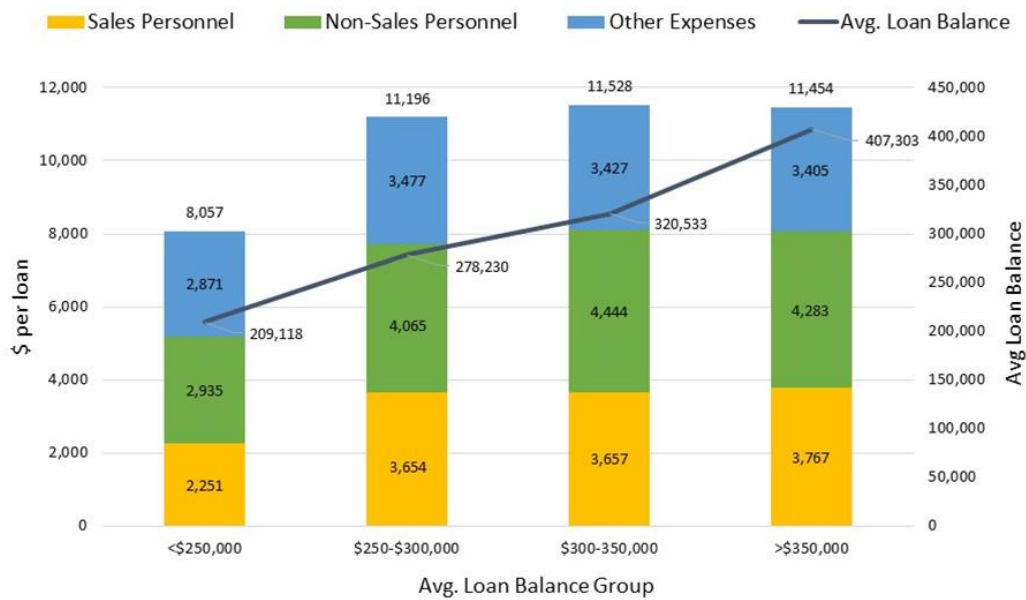
The comparison of 2021 and 2022 data suggests that the lowest loan balance lenders were better able to manage costs during a downturn with a variance of \$1,300 per loan in cost between 2021 and 2022, compared to about \$1,700 per loan for the other three groups. But there were no substantial cost advantages in per-loan terms – whether for sales or non-sales – among the three groups with balances over \$250,000 in 2021 and 2022. This suggests that production revenues played a bigger role in determining which among the three groups was more profitable (or less unprofitable).

Chart 8: 2021 IMB-Only Production Cost Components (\$ per loan) vs. Avg Loan Balance



Source: MBA’s Annual Performance Report for Independent Mortgage Companies and Subs of Banks

Chart 9: 2022 IMB-Only Production Cost Components (\$ per loan) vs. Avg Loan Balance



Source: MBA’s Annual Performance Report for Independent Mortgage Companies and Subs of Banks

Section 3: Mortgage Servicing Revenues, Costs, Net Income

Highlights

- Servicing revenue per loan increases as loan balances increase, because servicing fees are usually based on a percentage of the loan amount. For example, a typical 25-basis point servicing fee for a conventional conforming loan would yield \$125 annually on a \$50,000 (constant) unpaid principal balance (UPB) but \$1,250 on a \$500,000 (constant) UPB.
- Servicing expenses per loan rise as loan balances increase, but the cost increases more slowly than the servicing revenues do.
- Net servicing operating income per loan – servicing fees, ancillary income, and escrow earnings less operating costs – increases as loan balances increase, since the revenue increases outweigh cost increases.
- Similar to lending operations, servicers with the highest loan balances report the most variability in net servicing financial income (net operating income plus gains/losses associated with the mortgage servicing asset) between mortgage cycles. Among loan balance peer groups, servicers with the highest loan balances seem to garner the highest highs for net servicing financial income in markets with low prepayment activity such as 2022, but the lowest lows in markets with high prepayment activity such as 2020.

Data Sources

MBA collects data on servicer revenues, expenses, and overall profitability through three different sources:

1. MBA's Servicing Operations Study and Forum (SOSF). Geared toward the "top 50" mortgage servicers, this annual study is the most detailed and in-depth benchmarking tool available in the industry for servicing revenues, costs, and operational metrics. It includes "in-house" servicers (vs. those firms that own the mortgage servicing right⁹ but use a third-party subservicer to handle customer service, default, etc.). SOSF includes bank depositories and independent mortgage companies. Most of the servicers included in this analysis own the mortgage servicing right and operationally service the loan themselves. Companies that only subservice loans are excluded.
2. The MBA and STRATMOR Peer Group Roundtables Program (PGR). We supplement the SOSF data to have a larger and more varied sample for our analysis by incorporating additional firms – other large banks, large independents, community banks, credit unions, and mid-size independents who own mortgage servicing rights and service their loans in-house that are not in the SOSF. Together with the SOSF data, 43 servicers are included in our analysis, representing about 50 percent of the servicing market (total debt outstanding) in 2022.
3. MBA's Quarterly and Annual Performance Reports (APR). This sample of 150 servicers is comprised solely of independent mortgage companies and subsidiaries of banks. Based on data from the Mortgage Bankers Financial Reporting Form (MBFRF), 128 servicers are represented of which approximately one-third handle servicing in-house, while the remaining two-thirds rely on a third-party subservicer to handle servicing operations for them, while they still retain the mortgage servicing right. The sample represents about 20 percent of the servicing market (total debt outstanding) in 2022.

What is Included in a Servicer's Revenues and Expenses?

When examining the economics of servicers with different loan balances, it is first important to understand all revenues and costs associated with servicing operations, some of which are often overlooked.

⁹ The mortgage servicing right is an asset that gives the owner of the asset the right to service an existing mortgage and perform functions required to service the loan in exchange for a fee. See [What is a Mortgage Servicing Right \(MSR\)? \(miacanalytics.com\)](https://www.miacanalytics.com/what-is-a-mortgage-servicing-right-msr/).

Servicing Revenues

The components of servicing revenues include servicing fees net of guarantee fees, ancillary fees such as late payments, and net interest earnings on principal and interest (P&I) and taxes and insurance (T&I) accounts held in escrow prior to remittances to investors, insurers, and tax authorities (float benefit) less interest expenses.

Servicing fees are usually paid as a percentage of the loan balance, net of guarantee fees passed through to Fannie Mae, Freddie Mac, Ginnie Mae, and/or a private conduit. In general, servicing fees are about 25 basis points for conventional conforming and jumbo fixed rate loans, 25 basis points for adjustable-rate loans, 30 basis points for government loans (19 basis points for Ginnie Mae II program), and 50 basis points for acquired non-performing loans.

Ancillary income, the majority of which are late fees, also includes other fees such as payoff statement fees, loss mitigation incentive payments, and not sufficient funds (NSF) charges.

Net escrow earnings include interest income on principal and interest (P&I), and taxes and insurance (T&I) held in escrow prior to remittances to investors, less all servicer-related interest expenses such as interest expense on advances of P&I and T&I, interest on escrows paid to borrowers in states that require it, and interest shortfall on servicer mortgage-backed security payments resulting from time differences between the borrower's prepayment date and the date that security holders are paid.

Servicing Expenses

The key components of the total servicing costs include direct servicing costs, unreimbursed foreclosure, REO, and default-related servicer expenses, and corporate allocations.

Direct servicing costs include personnel, occupancy, equipment, outsourcing, and other miscellaneous expenses associated with servicing a loan. They include performing the servicing duties stipulated in investor guides and in accordance with federal and state law. The following functional areas of servicing are covered in direct cost to service: customer service, set-ups and transfers, lien releases, servicing systems, default (collections, loss mitigation, bankruptcy, and certain foreclosure and REO functions), escrow, investor reporting and accounting, cashiering, and servicing administration.

Unreimbursed foreclosure, REO and other default-related expenses are another type of servicing cost. During the late delinquency and foreclosure process, certain default-related types of fees are incurred by the servicer and are often reimbursed by the investor. Generally, reimbursable expenses include attorney fees, foreclosure costs and expenses (eviction costs, posting costs, certified mail, recordation etc.), utilities costs, property preservation, and inspection fees. Servicers submit a request for reimbursement from the investor. However, depending on the loan type and any servicer errors or indemnifications, such costs might not be fully reimbursed.

A final cost that needs to be incorporated into fully loaded servicing costs is corporate allocation costs for human resources, legal, company-wide technology support, corporate finance and treasury, and executive management.

Servicing Net Operating Income

Servicing net operating income is defined as total revenues (servicing fees, ancillary income, and net escrow earnings) less total servicing expenses (direct costs, unreimbursed foreclosure, REO, and other default-related costs, and corporate allocations).

SOSF/PGR Sample: What the Data Tells Us

Peer Groupings. The SOSF/PGR sample – covering 2022 data – was split into three relatively equal groups based on average loan balances. The first peer group averaged \$176,314, with a low of \$136,598 and a high of \$197,872. The second peer group averaged \$217,724, with a low of \$201,623 and a high of \$233,939. The third peer group averaged \$268,395, with a low of \$240,492 and a high of \$350,487. The total sample average was \$220,739.

Servicing Revenues. The average servicing revenues for the entire SOSF/PGR sample was \$599 per loan (27 basis points) for the year 2022. In basis points, revenues were similar across the three peer groups, with less than 2 basis points separating them. The difference in revenue in basis points could be caused by a variety of factors such as: the types of loans serviced, how banks impute service fees for loans that are held in portfolio (held for investment)¹⁰, the default rate for the portfolio (which influences whether fees are collected), the firm’s late and ancillary fee policy that can vary based on state and investor requirements, and amount of servicing escrow earnings.

Once the servicing revenue is converted to dollars per loan (cash coming in), the relatively flat servicing revenues demonstrated in basis points goes away. Between the lowest balance group and highest balance group, the cash difference is \$241 per loan: \$471 per loan in revenues for the lowest balance peer group, compared to \$712 per loan for the highest balance group. Both servicing fees and escrow earnings are generally dependent on the average loan balance that influences the monthly mortgage payment, which leaves late and ancillary fees as the only revenue source not generally dependent on loan size.

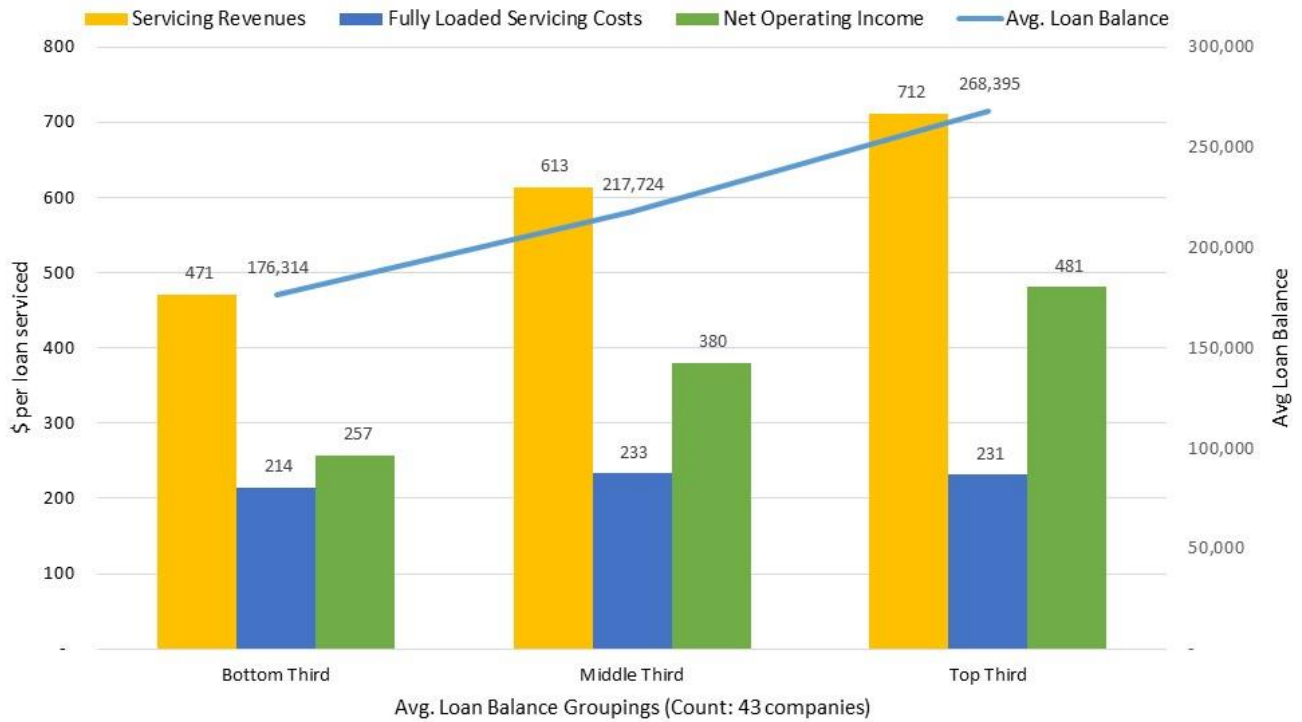
Servicing Expenses. In terms of fully-loaded servicing costs – covering the direct cost to service, unreimbursed foreclosure, REO, and other default-related expenses, and corporate costs – the average costs for the entire SOSF and PGR sample were \$226 per loan (10 basis points) for 2022. Costs in basis points differ between groups, with expenses on the lowest balance loans higher at 12.3 basis points, than expenses on the highest balance loans at 8.5 basis points. In other words, servicing costs for the companies with the lowest average balances represent a higher overall percentage of the average loan balance compared to companies with higher average balances. In dollars per loan (Chart 10), there is only a \$19 per loan difference between the groups for this sample, indicating there are flat fixed costs associated with servicing loans of varying average loan balances.

Other variables besides loan balance influence cost. Default rate is a leading factor influencing costs. In this sample, the lowest balance group has the highest default rate at 4.2 percent, while the mid-group is at 3.2 percent, and the highest group is at 2.6 percent. Assuming the lowest balance group has the highest percentage of affordability products – generally with lower balances – and fewer “high-wealth” jumbo loans, costs could escalate. Other factors influencing costs include servicer’s overall servicing portfolio size (potential for economies of scale); the rate of servicing churn – the loans moving in and out of servicing portfolios due to loan set-ups, transfers and/or prepayments; the age of loans in the portfolio; and technology capabilities of servicers. But these factors tend to be a mixed bag. For example, large servicers subject to large servicing settlements in the last decade had average servicing costs that were higher than many smaller servicers despite the perceived economies of scale.

Net Servicing Operating Income. Once servicing expenses are subtracted from revenues, net servicing operating income averages \$372 per loan (17 basis points) for the entire SOSF and PGR sample in the year 2022. Net operating income is more favorable for the highest balance servicers in this sample, with net profits of \$481 per loan – a \$224 per loan difference between the lowest and highest balance peer groups. The revenue component drives the difference in net operating income, favoring large balance servicers.

¹⁰ For SOSF and PGR purposes, MBA requests that banks holding loans in portfolio impute a “market rate” servicing fee instead of an intra-bank servicing fee that may be based on typical subservicing fees, or simply the direct cost to service the loan.

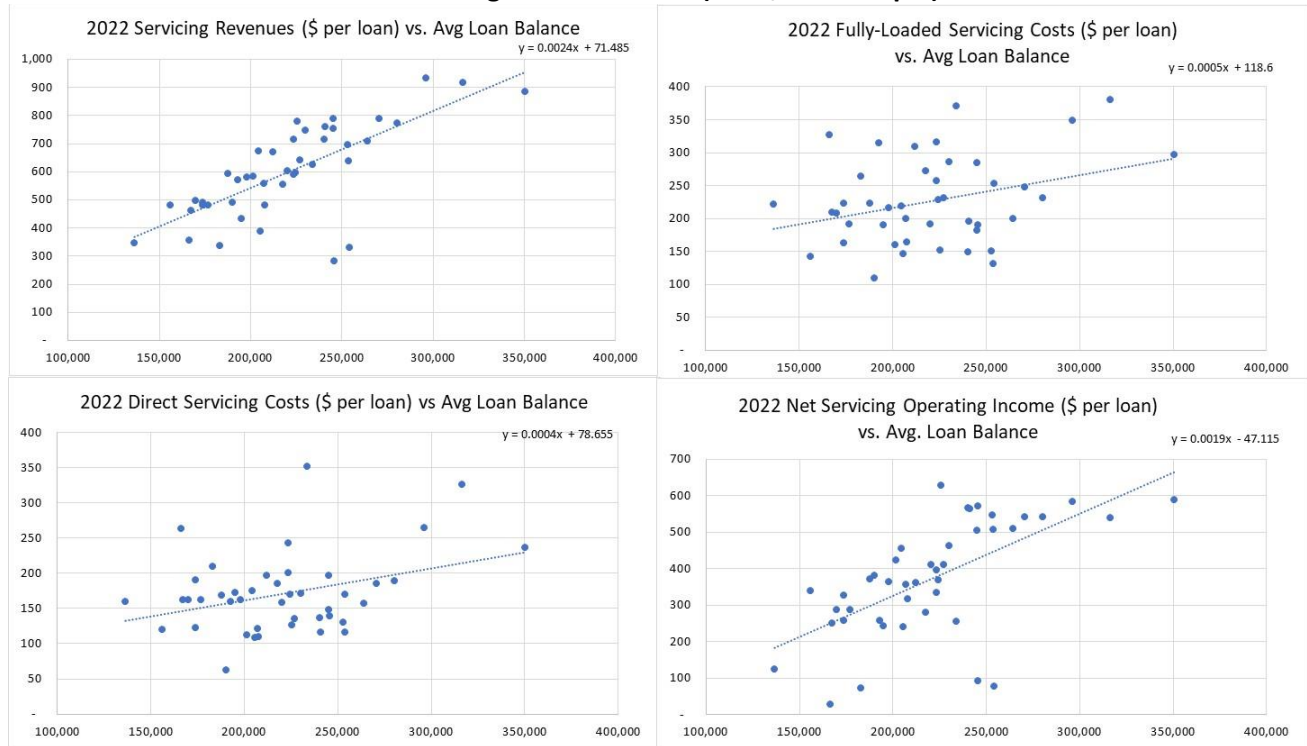
Chart 10: 2022 Servicing Revenues, Costs, Net Operating Income in \$ per loan vs. Avg Loan Balance (SOSF/PGR Sample)



Source: MBA’s Servicing Operations Study and Forum (SOSF) and MBA and STRATMOR Peer Group Roundtable Program (PGR)

SOSF and PGR Data Scatterplots. Another way to analyze the servicing benchmarking data is through scatterplots, instead of aggregated groups of servicers. Scatterplots for the 43 servicers are shown in Chart 11 and include: servicing revenues, servicing direct costs, servicing fully loaded costs, and net operating income relative to average loan balances in 2022. Like our aggregated groups divided by loan balance, revenues are driving the differences in net operating income. As loan balances grow, revenues increase to a greater extent than servicing costs. The scatterplots reveal a weaker relationship of servicing cost to loan balances, with other factors such as default rate and servicing churn likely weighing more heavily on operational cost.

Chart 11: Scatterplots for 2022 Servicing Revenues, Costs, Net Operating Income \$ per Loan vs. Average Loan Balances (SOSF/PGR Sample)



Source: MBA’s Servicing Operations Study and Forum (SOSF) and MBA and STRATMOR Peer Group Roundtable Program (PGR)

Annual Performance Report (APR) Sample: What the Data Tells Us

Peer Groupings. For the larger sample of independent mortgage companies and a few subsidiaries of banks from the APR, four peer groups are organized based on a specific loan size range rather than equal groups based on the number of companies. The 2022 loan balances for the four peer groups are:

1. Less than \$200,000 with an average loan balance of \$147,810.
2. \$200,000 – \$250,000 with an average loan balance of \$229,022.
3. \$250,000 - \$300,000 with an average loan balance of \$275,269.
4. Over \$300,000 with an average loan balance of \$334,863.

Overall, the average loan balance for the 128 companies in the APR sample was \$236,272 – about \$20,000 higher than the SOSF/PGR sample. Unlike the SOSF/PGR data that include some of the largest in-house servicers in the servicing business with legacy portfolios and earlier vintage-year loans, many of the servicers in the APR are companies with relatively newer portfolios originated in more recent years and with higher loan balances.

Another key difference from the SOSF/PGR sample is that most companies in the APR sample are not in-house servicers. Of this total sample, an average of 62 percent of the servicing volume is subserviced by others, meaning that the firms (MSR holders) use an unaffiliated third-party service provider to operationally service the loans on their behalf. Of the four peer groups, the group with the lowest loan balance had the lowest percentage of loans serviced by a subservicer, at 23 percent, compared to the other groups in which over 65 percent were subserviced. For the top group by loan balance, over 85 percent of loans were subserviced. This becomes an important distinction when ascertaining differences in servicing costs between the peer groups.

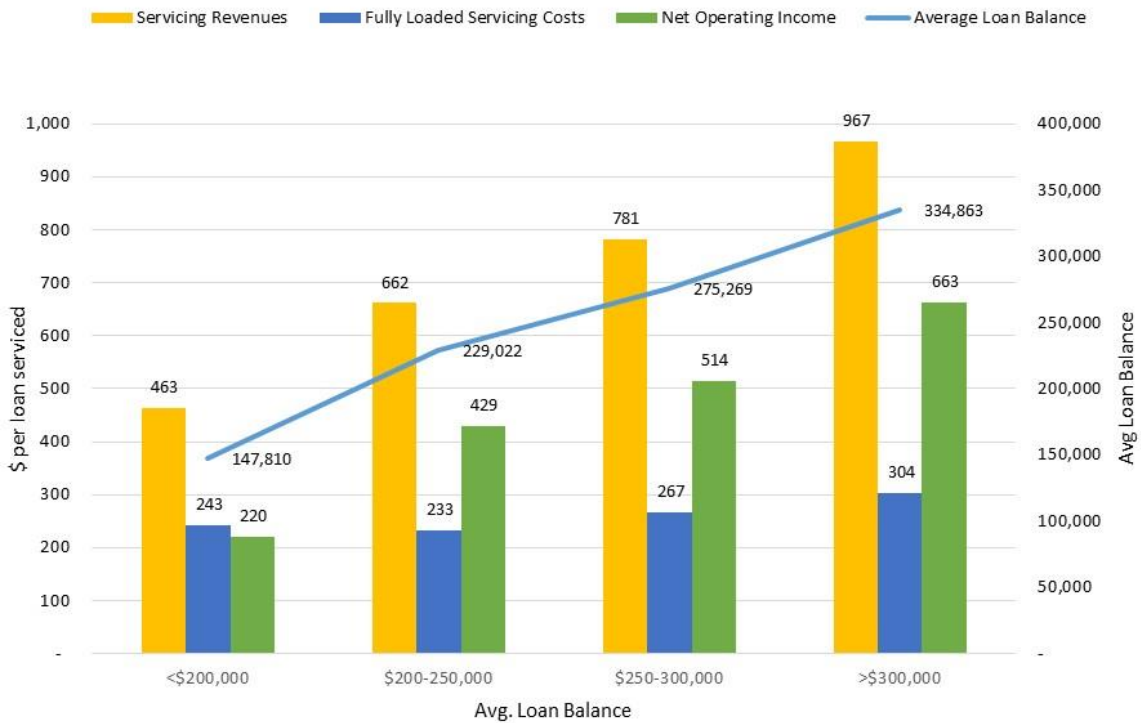
Servicing Revenues. Overall revenues across the entire sample averaged 29.7 basis points, or \$688 per loan in 2022. Like the SOSF/PGR sample, revenues for the APR sample showed progressively lower servicing revenues in basis points between the lowest balance peer group (at 33 basis points) and the highest balance peer group (at 29 basis points). This difference is likely driven by different product mixes, with the lowest balance group having the highest percentage of government loans and possibly keeping excess servicing beyond the typical market service fee. Converting revenues from basis points to dollars per loan, there were progressively higher servicing revenues in dollar per loan, moving from the lowest balance peer group (at \$463 per loan) and the highest balance peer group (at \$967 per loan) – a \$504 per loan difference.

Servicing Expenses. Overall expenses across the entire sample averaged 11.7 basis points, or \$256 per loan in 2022. Expenses in basis points were highest for the lowest balance loans at 17.1 basis points, compared to 9.0 basis points for the highest balance loans. When converting basis points to dollars per loan, servicing costs were lowest for the lowest balance peer group at \$243 per loan, compared to \$304 per loan for the highest balance peer group – a \$61 per loan difference. The result from the APR contrasts with the SOSF/PGR sample of “Top 50” servicers (generally much larger servicers and predominantly serviced in-house) that showed flatter fully loaded servicing costs across its three peer groups, with only \$17 per loan separating the smallest balance peer group and largest balance peer group in 2022.

Then why the difference in servicing cost among the APR groups? One reason is the sample of servicers in the APR represented in the highest balance group (over \$300,000 average loan balance) still don't have the volume necessary to achieve economies of scale. The highest balance group averaged about 35,000 loans serviced per firm, the lowest among the four groups. The highest balance group may be primarily comprised of firms that are relatively new to servicing retention – taking advantage of the favorable production profits from 2020 and 2021 to retain mortgage servicing rights. Start-up costs of retaining mortgage servicing would include set-up costs with a subservicer, developing an in-house subservicing oversight function, and per-loan subservicing fees that may drop as volume increases. Even though the lowest balance group posted the highest share of government loans, their fixed costs were divided over more loans with the help of more in-house servicing and more volume. In addition, the composition of their loans could include legacy performing low-balance loans that simply do not turn over and do not require much in the way of servicing resources.

Net Servicing Operating Income. Overall, servicing net operating income across the entire APR sample averaged 18.0 basis points, or \$433 per loan in 2022. For the lowest balance peer group, having the lowest per-loan costs compared to the other groups did not compensate enough for its revenue disadvantage. Similar to our SOSF/PGR sample, in the APR sample, servicing net operating income per loan generally increased as the average loan balance increased.

Chart 12: 2022 IMB Servicing Revenues, Costs, Net Operating Income in \$ per loan vs. Avg Loan Balance (Annual Performance Report)



Source: MBA’s 2022 Annual Performance Report

Scatterplots. Chart 13 shows the revenues, costs, and net operating income for the APR sample, compared to average loan balance. Compared to the same scatterplots for our “Top 50” servicers from the SOSF/PGR sample, there is one clear difference. The base costs to service loans are higher for the APR sample compared to the SOSF/PGR sample, possibly driven by the companies in the APR sample that were in servicing start-up mode, using a subservicer, and generally servicing fewer loans. But consistent with the SOSF/PGR sample, servicing revenue, and not servicing expense, was driving the increases in net operating income as average loan balances grew.

Chart 13: Scatterplots for 2022 IMB-Only Servicing Revenues, Costs, Net Operating Income in \$ per Loan vs. Average Loan Balances (Annual Performance Report)



Source: MBA's 2022 Annual Performance Report

Mortgage Servicing Rights and Net Servicing Financial Income.

Net Servicing Financial Income. The focus of this analysis is the relationship between varying loan balances and net operating income for servicers – servicing fees, ancillary income, late fees, and net escrow earnings less fully-loaded servicing costs. But this tells only part of the story. Loan size also plays a role in the valuation of the mortgage servicing right as an asset, and ultimately, net servicing financial income. Under the current accounting rules, mortgage companies that own mortgage servicing rights (MSRs) are required to book the value of that asset upfront at time of origination and adjust earnings to account for changes in the value of MSRs depending on expected prepayment activity, changes in the cost to service, default rate, and other factors. In addition, servicers must report the amortization (or loan decay) for these assets, MSR hedging gains or losses, and gains or losses on the bulk sale of MSRs. Servicing net financial income incorporates these MSR-related items with the net operating income.

In Charts 14 and 15, we revisit the PGR/SOSF sample for 2020 data (a high prepayment year) and 2022 data (a low prepayment year). The relationship between net servicing operating income and net servicing financial income is displayed across the loan balance peer groups. For the highest loan balance group in 2020, heavier prepayment activity in 2020 caused substantial net financial losses that eclipsed the lower balance peer groups. In 2022, slower prepayment activity in 2022 led to substantial write-ups in MSR valuations and higher net financial income that eclipsed lower balance peer groups. Similar to production operations, servicers with the highest loan balances report the most variability in net financial income between mortgage cycles.

Chart 14: 2020 and 2022 Net Servicing Operating Income in \$ per loan vs. Avg Loan Balance (SOSF/PGR Sample)

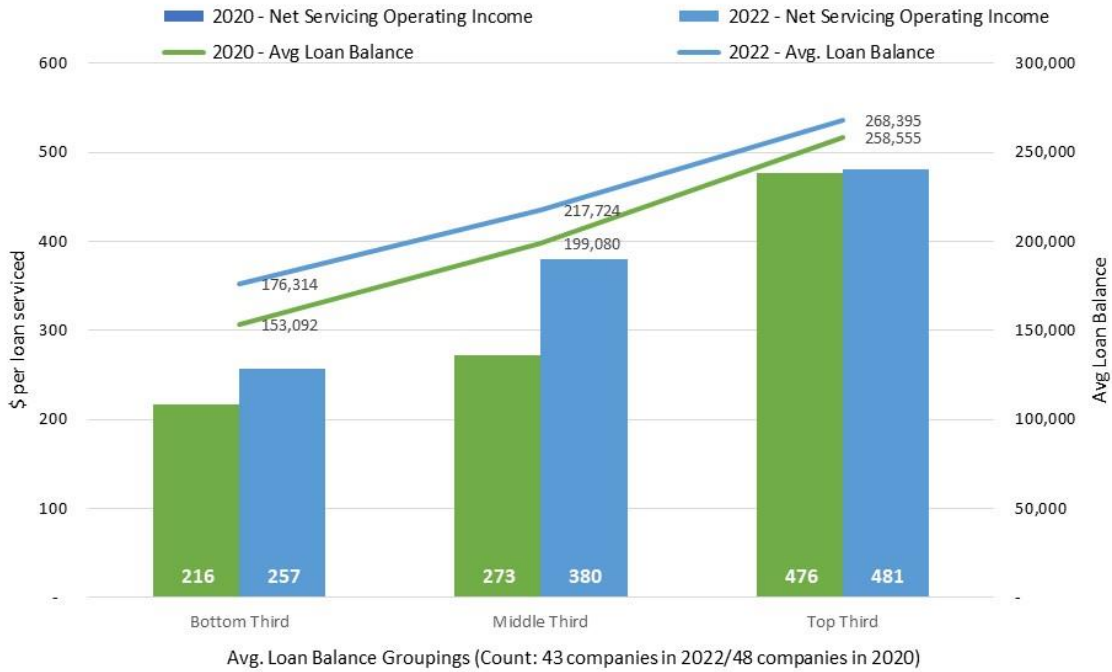
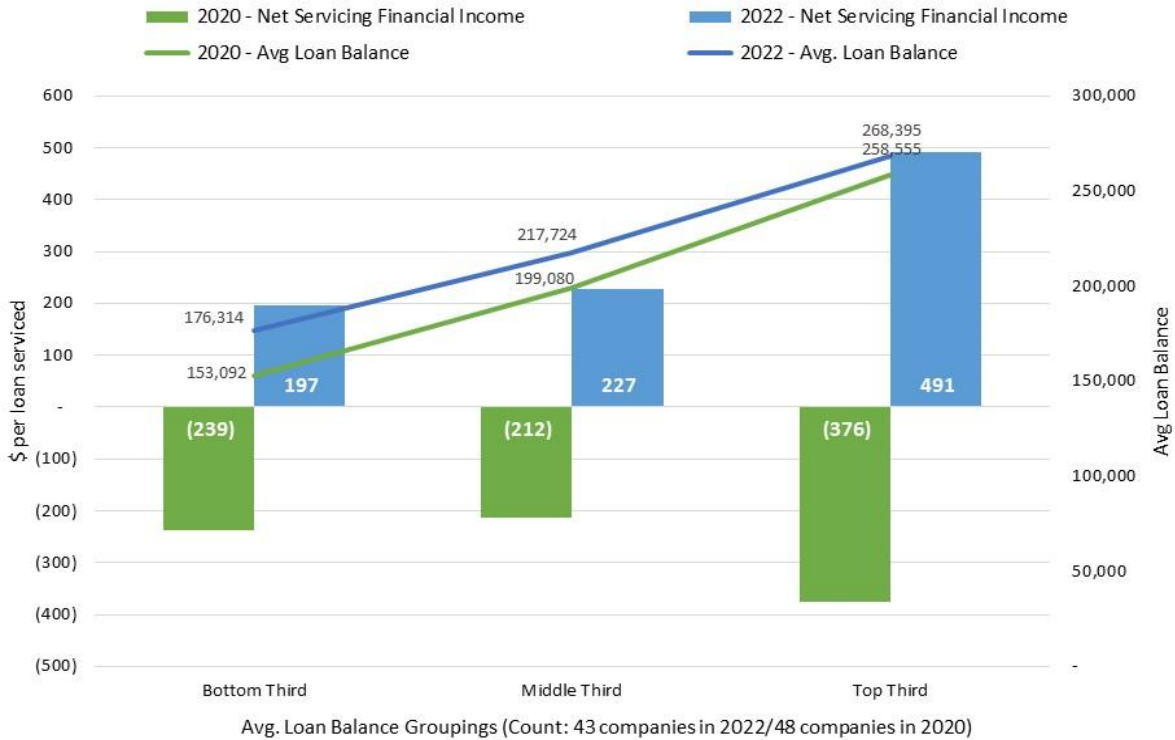


Chart 15: 2020 and 2022 Net Servicing Financial Income in \$ per loan vs. Avg Loan Balance (SOSF/PGR Sample)



Section 4: Final Thoughts

MBA's detailed data collection programs provide a unique ability to test the relationship between revenues, expenses, and net profits relative to loan balances.

Through the mortgage cycles, the relationship between loan balance and pre-tax net production income is best exemplified with the PGR data sample that represents both banks and independents. Companies with the highest loan balances (averaging over \$560,000 in 2022) experienced the highest highs for net production profits in 2021 – a strong market, but the lowest lows in 2022 – a weak market. Meanwhile, companies with the lowest loan balances (averaging less than \$269,255) mitigated net production losses in 2022 – a weak market – through lower fixed and variable costs but also performed the worse in 2021 – a strong market – because much lower revenues hurt net profits despite cost advantages. The data from the Annual Performance Report presents a similar picture for strong mortgage markets, but a mixed picture for weaker mortgage markets, suggesting that other variables besides loan balance may be better for determining production profitability.

Similarly, there is a relationship between loan balances and net servicing financial income - which includes net operating income plus gains/losses in the valuation of mortgage servicing rights, amortization/loan decay of the servicing assets, gain/loss on bulk sale of servicing, and any servicing hedging gains or losses. This relationship is best exemplified through the SOSF/PGR sample. Servicers with the highest loan balances experienced the highest highs for net servicing financial income in 2022 when there was low prepayment activity, but the lowest lows in 2020 when there was high prepayment activity. Removing the MSR-related items and focusing on operating revenues and costs, servicing revenue per loan increased as loan balances increased in our analysis, as servicing fees are usually based on a percentage of the loan amount. Given the nature of fixed costs, servicing expenses were much flatter across peer groups of different loan sizes. The result? Net servicing operating income per loan generally increased as loan balances rose because the revenue gains outweighed more incremental cost increases.

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