

Goosehead Insurance Inc.

Fewer agents, decelerating pricing: 2024 presents major challenges

Maintain Rating: UNDERPERFORM | PO: 42.00 USD | Price: 74.29 USD

Revenues/KPIs have already hit below-target inflection

With Goosehead delivering 29.3% controlled premium growth in 4Q23 and guiding to 25-30% for 2024, the company has already dropped below its long-term guidance of 30%+ growth through 2027 despite the most significant price increases in personal lines insurance in nearly 50 years. We expect the company will miss its revenue guidance of \$310-320mn for 2024 as it continues to struggle to find open franchisees and to successfully convert newer franchisees into strong producers. 2024 is likely to draw a difficult comparable with 2023 as personal lines pricing decelerates.

Perceived productivity “boost” may likely prove fleeting

The company has offered new disclosures to demonstrate increasing productivity among its agents; however, these improvements seem largely a function of declining agent count (lower denominator) as opposed to improvements in new business production among productive agents. The implication of new, higher levels of productivity does not appear to be registering as improving revenue trends with 4Q23 revenue near the bottom of previous guidance and 2024 guidance below consensus (of which we expect Goosehead will ultimately miss). The combination of declining agent count and a slower pace of home/mortgage sales is weighing on new production.

Cash flow and EBITDA numbers overstated

In terms of both “adj.” EBITDA and operating cash flows, these number significantly benefitted from \$24mn in share-based compensation in 2023. Over the past four years, shareholders have been, on average, diluted by just over 1% annually, which is equivalent to about \$30mn+ a year at the current market cap. Operating cash flow excluding cap/ex, share-based comp and deferred taxes was just \$13.1mn in 2023, or 5.0% of revenue of \$261mn. Despite having grown by a 36% revenue CAGR over the last four years, “free” cash flow as a percentage of revenue has largely been in a state of decline.

Recommendation remains Underperform; PO of \$42

Our PO of \$42 is based upon a discounted-cash-flow analysis using our earnings projections for a 15-20% revenue CAGR through 2028 and a residual growth rate of 10%. With the company guiding to about 20% revenue growth for 2024 against the backdrop of historically high increases in personal lines insurance pricing, we believe the risk is to the downside regarding our longer-term revenue projections. With significant downside potential to our price objective, we rate shares as Underperform.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	0.55	1.23	1.67	2.46	2.46
GAAP EPS	0.03	0.58	0.93	1.66	1.60
EPS Change (YoY)	14.6%	123.6%	35.8%	47.3%	0%
Consensus EPS (Bloomberg)			1.59	2.23	3.20
DPS	0	0	0	1.30	2.58
Valuation (Dec)					
P/E	135.1x	60.4x	44.5x	30.2x	30.2x
GAAP P/E	2,476.3x	128.1x	79.9x	44.8x	46.4x
Dividend Yield	0%	0%	0%	1.8%	3.5%

28 February 2024

Equity

Joshua Shanker
Research Analyst
BoFA
+1 347 821 9017
joshua.shanker@bofa.com

Grace Carter, CFA
Research Analyst
BoFA
+1 646 416 2114
grace.carter@bofa.com

Joseph Tumillo, CFA
Research Analyst
BoFA
joseph.tumillo@bofa.com

Cyril Onyango
Research Analyst
BoFA
cyril.onyango@bofa.com

Stock Data

Price	74.29 USD
Price Objective	42.00 USD
Date Established	22-Feb-2024
Investment Opinion	C-3-9
52-Week Range	43.84 USD - 92.76 USD
Mrkt Val (mn) / Shares Out (mn)	2,788 USD / 37.5
Free Float	23.4%
Average Daily Value (mn)	18.75 USD
BoFA Ticker / Exchange	GSHD / NAS
Bloomberg / Reuters	GSHD US / GSHD.OQ
ROE (2024E)	0%
Net Dbt to Eqty (Dec-2023A)	NA
ESGMeter™	Medium

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BoFA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to ["BoFA ESGMeter Methodology"](#).

BoFA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 13 to 15. Analyst Certification on page 11. Price Objective Basis/Risk on page 11.

12664917

Timestamp: 28 February 2024 05:00AM EST

iQprofileSM Goosehead Insurance Inc.

Income Statement Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Total Earned Premiums	188	233	268	286	296
Net Investment Income	NA	NA	NA	NA	NA
Total Revenue	209	261	301	346	363
Total Cost of Benefits and Claims	NA	NA	NA	NA	NA
S,G & A (Including Commissions)	(186)	(215)	(235)	(239)	(254)
Total Operating Expenses	(204)	(235)	(255)	(263)	(281)
Pre-Tax Operating Earnings	5	26	46	83	82
Income Tax Expense	(2)	(3)	(10)	(18)	(17)
Operating Earnings After Tax	12	30	46	77	86
Net Income (Reported)	1	14	26	52	56
Diluted Shares	22	24	28	31	35
Operating Earnings Per Share	0.55	1.23	1.67	2.46	2.46
Net Income (Reported) Per Share	0.03	0.58	0.93	1.66	1.60

Balance Sheet Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Fixed Income Securities	NA	NA	NA	NA	NA
Total Cash and Investments	29	42	103	196	240
Total Assets	321	355	419	513	559
Reserves	NA	NA	NA	NA	NA
LT Debt	87	68	68	118	168
Total Liabilities	355	338	339	390	440
Total Equity	(34)	17	80	124	119
Total Equity (Ex FAS 115)	(34)	17	80	124	119
Book Value per Share (Reported)	3/31/2022	3/31/2023	3/31/2024	3/31/2025	3/31/2026
	120000 AM	120000 AM	120000 AM	120000 AM	120000 AM
Book Value per Share (Ex FAS 115)	NA	NA	NA	NA	NA

Ratios (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Expense Ratio	98.9%	92.1%	87.9%	83.9%	85.7%
Loss Ratio	0%	0%	0%	0%	0%
Combined Ratio	98.9%	92.1%	87.9%	83.9%	85.7%
Avg Assets / Avg Eq (Ex FAS 115) Ratio	NM	NM	8.0x	4.6x	4.4x

Growth Rates (YoY) (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Total Earned Premium	41.1%	23.8%	14.9%	6.7%	3.8%
Net Investment Income	NM	NM	NM	NM	NM
Total Revenue	38.4%	24.8%	15.1%	15.2%	4.8%
Operating Earnings per Share	14.6%	123.6%	35.8%	47.3%	0%
Asset	20.0%	10.4%	18.0%	22.5%	8.9%
Reported Book Value per Share	0.8%	0.8%	0.8%	0.8%	0.8%

Performance Metrics (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Operating ROE	NA	NA	NA	NA	NA
Operating ROE (Ex FAS 115)	NA	NA	NA	NA	NA
Operating Return on Average Assets	4.1%	8.9%	12.0%	16.6%	16.1%
Operating Margin	5.7%	11.5%	15.4%	22.3%	23.8%
Long Term Debt to Cap Ratio (Ex FAS 115)	163.3%	80.1%	45.8%	48.7%	58.5%
Net Income % Operating Income	4.7%	46.9%	55.5%	67.3%	64.9%
Amtz of DAC % Pretax Profit bef Amtz of DAC	0%	0%	0%	0%	0%

Company Sector

Insurance - Non-Life

Company Description

Goosehead is attempting to build a large-scale personal lines insurance brokerage company using a unique sales and service model. The company operates through its own agents as well as franchise agents. Goosehead leads with homeowners business, which is typically stickier than auto insurance. Customer retention is high in this space and Goosehead keeps a larger percentage of renewal business.

Investment Rationale

Goosehead is a rapidly growing business, and we believe it is well-positioned for continued growth moving forward due to a strong pipeline of potential franchises and its unique business model of separating sales from client services. We estimate 15-20% revenue CAGR over 2025E-27E. That said, we believe that the current share price already reflects the strong growth outlook. At a 11% discount rate on future cash flows, we believe the stock is more than fully valued, risking downside.

Stock Data

Average Daily Volume 252,360

Quarterly Earnings Estimates

	2023	2024
Q1	0.17A	0.30E
Q2	0.41A	0.49E
Q3	0.46A	0.53E
Q4	0.28A	0.36E

Decelerating/declining KPIs

On Wednesday, February 21, Goosehead reported its year-end 2023 results. The stock reacted badly to these results (down 18%), and, following feedback from investors, we believe the negative reaction was largely based on what was perceived as a poor outcome for revenue. 4Q23 revenue of \$63.0 million (just 10% higher than 4Q22) ran below our forecast of \$69.3 million and consensus of \$68.6 million and toward the lower end of guidance of \$62-69 million. Additionally, 2024 revenue guidance of \$310-320 million fell below consensus of \$336 million, though ahead of our forecast of \$301 million. Finally, management guidance for year-end controlled premium of \$3.7-3.85 billion (25-30% above year-end 2023) falls below its 30%+ long-term guidance through “at least 2027” (reiterated as recently as October 2023), though, compared with our \$3.5 billion our forecast, we expect the company will fail to reach this year end target.

Investors seemed disappointed in revenue results for 4Q23 and the guide for 2024. We believe that the company’s long-term guidance of 30%+ controlled premium growth is no longer realistically part of the outlook.

U.S. auto insurance rates ended 2023 up 20% (according to Department of Labor CPI), while U.S. homeowners’ rates were up in the low-double-digit range (using Allstate and Travelers data as a proxy), albeit higher in states like Texas, California and Florida where Goosehead primarily operates. We expect that personal insurance price increases will continue to be elevated in 2024, albeit decelerating from recent peak increases, creating difficult year-over-year comparables vs. 2023. This rate of personal lines price increases has been greater in 2023 than anytime in about 50 years. The unprecedented tailwind will be less powerful in 2024. We believe the guidance to expect at least 30% premium growth through 2027 has already buckled with 4Q23 premium up just 29.3% over 4Q22 and the 25-30% guidance for 2024 (which we expect will not be achieved).

Unlike these “revenue-disappointed” investors, we have been less concerned about near-term revenue outcomes. Revenues should be/should have been outstanding and “overgrowing” due to two temporary tailwinds. First, as mentioned before, personal lines insurance is in a once-in-50-year pricing peak. We have been rating and rate shares of Goosehead as Underperform despite the assumption that revenue growth should be outstanding in this environment, fully prepared for it to be temporarily boosted. In addition to once-in-a-generation pricing, in 2023, the company was still enjoying the tailwind of pandemic-era home purchasing from 2022. The Goosehead franchise model collects just 20% royalties on new business, but 50% royalties on renewal business. The delayed waterfall effect means that revenue growth in 2023 should have still been supercharged by the home purchases of 2022 (particularly in Texas) converting from new business into a renewal. The year-over-year comparables will be much more difficult in 2024 with slower new policy production stemming from weaker new business in 2023.

We have been arguing that investors should be focused on unit economics instead of revenue growth in two long and detailed Goosehead-specific notes published on [November 14, 2023](#) and [January 8, 2024](#) that continue to remain relevant even after the 4Q23 miss. We believe investors should focus on 1) franchise growth and 2) policycount growth. These inputs are the pipeline to future long-term revenue production, and these two prior notes deeply focus on those issues. Since a peak of 1,407 franchises set at December 31, 2023, the franchise count at Goosehead has fallen 13% to 1,226 one year later. Ultimately, we believe Goosehead is in the business of selling insurance agency franchises, and, right now, it is failing to deliver on that measure.

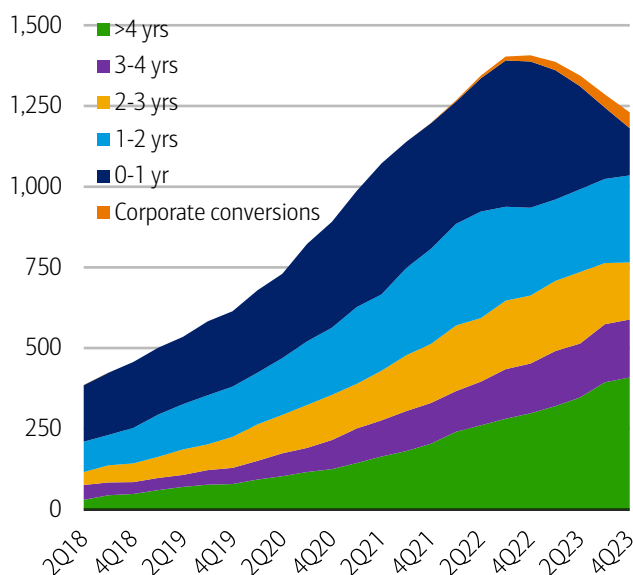


The company has had significant difficulty selling new franchises as well as difficulty matriculating the fewer number of “young” franchises into “seasoned” franchises.

Further, in anticipation of future production, the company onboarded just 54 new franchises in 2H23 as compared with 242 in 2H22 with 4Q23 onboardings of 24 being materially lower (about 55% lower) than the quarters of 2018 when Goosehead first supplied this information. While the company no longer supplies investors precise granular information about franchise vintage, 4Q23 “seasoned franchise” growth (as defined as franchises with at least two years’ operating experience and/or conversions from former corporate agents) were up by about 20%, linearly decelerating from 48% growth in 1Q22 (over 1Q21).

Exhibit 1: Goosehead franchises delineated by vintage

First-year Goosehead franchises have declined precipitously. Since 2Q23, Goosehead has chosen to no longer update investors regarding the vintages of older franchises. (We have estimated 2nd through 4th+ year for 2Q23-4Q23.) Total franchise count has declined from its year-end 2022 peak.

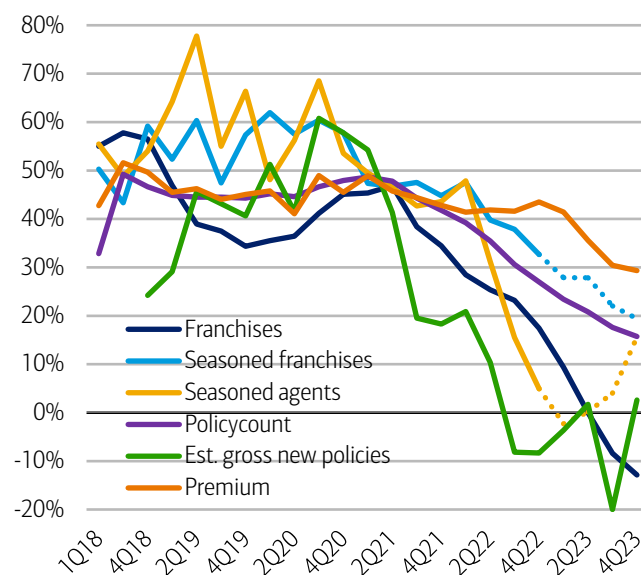


Source: Company reports and BofA estimates

BofA GLOBAL RESEARCH

Exhibit 2: Year-over-year change in key production measures

Most key production measures at Goosehead have been in a state of multi-year deceleration (or decline) beginning in mid-2021. The exception is new policy production, which has been flat-to-negative since 3Q22, but was modestly positive in 4Q23, which may attest to improved productivity.



Source: Company reports and BofA estimates

BofA GLOBAL RESEARCH

We expect this declining trend to continue with the pipeline of “young franchises” (those with less than two years’ experience and not having converted from a corporate agent) down 43% to 413 from 725 a year ago. We expect this “young franchise” number to continue to decline sharply, which ultimately represents the pipeline for future business production.

Policycount and productivity

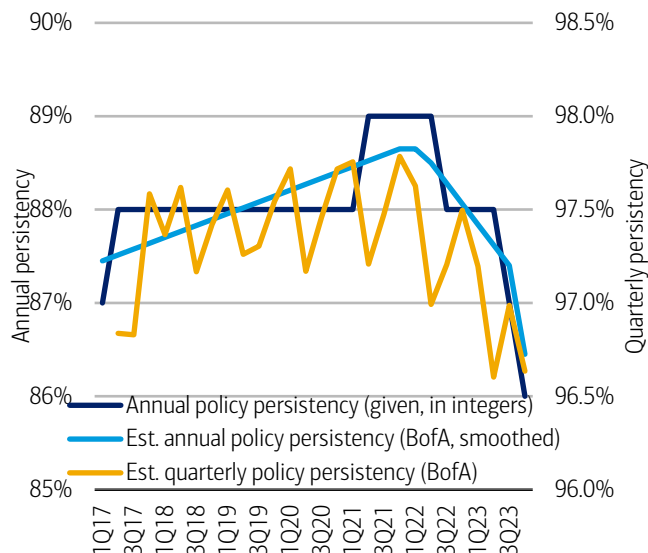
Goosehead management has argued that investors should overlook the decline in franchise count and instead focus on the productivity of remaining franchises. The company has been in the process of “culling” its book of underperforming franchises, which is improving the productivity of remaining franchises, and it has also been converting the best agents working for the Goosehead corporate agency into franchises, which is boosting the productivity of newer franchises and the franchise pool more broadly. And, potentially, there is some evidence that supports this argument.

In 4Q23, average annual policy persistency for a Goosehead controlled policy fell to 86% from 87% in 3Q23. That follows on a drop from 88% in 2Q23 to 87% in 3Q23 (as well

as peaking at 89% in 2Q22). Unfortunately, Goosehead only provides this data to investors to the nearest integer. If we had this data to a hundredth or even a tenth place, we would be able to precisely convert the quarterly policies under control data from a net change to a gross change, which would tell us how many new policies the company added in a given year (or quarter with a little more time series math). Because of the integers, some estimation is required. We aimed to give these integers some “smoothness” in trying to convert these annual persistency numbers into quarterly persistency and, in turn, estimating with the number of Goosehead policies lost on a quarterly basis, rounding it to the nearest thousand of policies.

Exhibit 3: Annual policy persistency including quarterly estimates

Annual policy persistency has exhibited a sharp drop in 2H23, which requires the company to increase gross new policy additions in order to maintain net policycount growth.

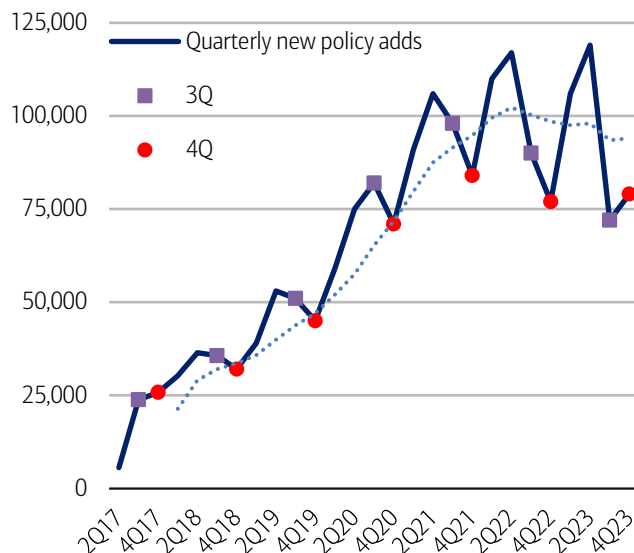


Source: Company reports and BofA estimates

BofA GLOBAL RESEARCH

Exhibit 4: Est. gross new policycount additions imply seasonality

After very poor gross policycount production in 3Q23, Goosehead appears to have increased new policy additions to its portfolio defying a seasonal trend where the fourth quarter is the weakest annually.



Source: Company reports and BofA estimates

BofA GLOBAL RESEARCH

As persistency declines, policycount declines more quickly. To maintain growth rates, the company would need to add incremental policies to replace those loss policies. In terms of our estimates, it implies that net policycount additions accelerated from 3Q23 levels into 4Q24. The company net grew policycount by 30k policies to 1,486k in 4Q23 despite the drop in persistency to 86%. By our math, this implies 79k gross new Goosehead policies in 4Q23. This compares with our estimate of 72k gross new policies in 3Q23.

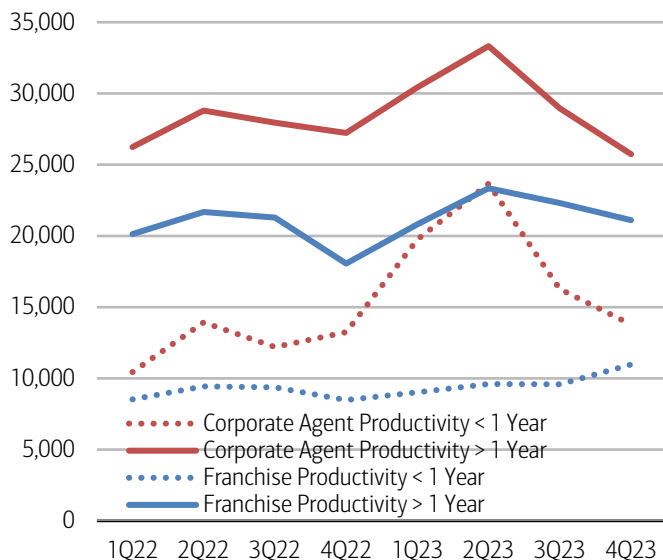
4Q23 policy production seems to have improved over 3Q23, despite 4Q traditionally being the worst quarter for new business generation. This may be an indication of accelerating productivity among agents.

What is interesting is that this 4Q23 defies the seasonal trend of 4Q23 being the worst quarter for business production. There are reasons for this. Typically, families tend to change homes more often prior to the beginning of a new school year (which begins often in August in the Southeast and in September elsewhere) as opposed to switching their children's schools after the beginning of a new school year. Additionally, there is a seasonal slowdown of sales that occurs in the Christmas/New Year's holiday season, making for less days of potential production. As Exhibit 4 indicates, the 3Q23 drop in production seemed to resemble what one would expect in a typical 4Q, while production in 4Q23 uncharacteristically exceeded 3Q23's. This argues that many of the things Goosehead management has said about increased productivity hold true.

In 4Q23, Goosehead began to supply investors with new key performance indicators (KPIs) around productivity. The company began to give investors data on new commission production by franchises delineated between franchises in their first year as well as franchises with a year or more experience. The data indicates that first-year franchises showed a 29% increase in productivity in 4Q23 compared with year prior, while agencies with at least one year of experience saw a 17% increase in production. This productivity increase might point directly at the higher policy count in 4Q23 vs. 3Q23. However, we aren't sure that the productivity numbers actually show that. In a [prior note](#), we gave the example of a factory with two producers who make widgets and ask the reader to imagine that one producer can generate 10 widgets/day while the other generates none. That's 5 widgets per day per producer. When management finally gets around to eliminating the non-producing producer, productivity "rises" to 10 widgets per producer per day, even though the "producing" producer hasn't really changed work habits. When Goosehead tells investors that it is culling its franchisee force of agents producing less than 1% of volumes, it is difficult to determine if a productivity increase represents improvements in remaining per store sales or merely a slashing of the denominator. We believe it is the later.

Exhibit 5: Goosehead new business production per agent

With 4Q23, Goosehead offered new key performance indicators around agent productivity.

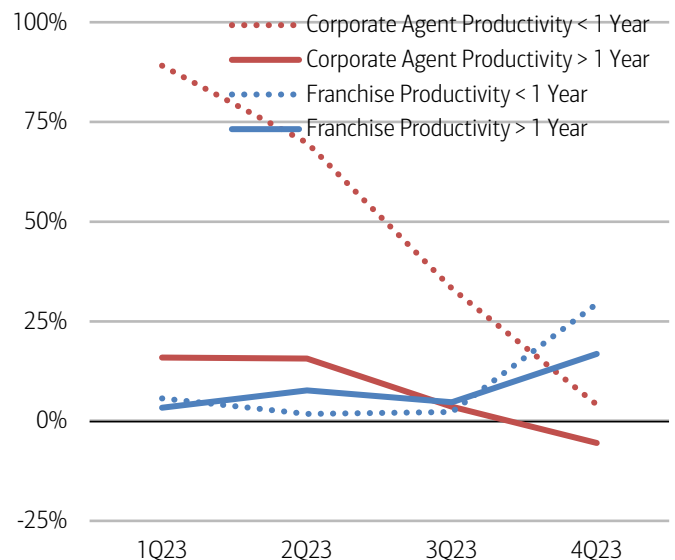


Source: Company filings

BofA GLOBAL RESEARCH

Exhibit 6: Year-over-year change in new business production per agent

The data shows significant improvements in franchise agency productivity and significant deterioration in corporate agency productivity.



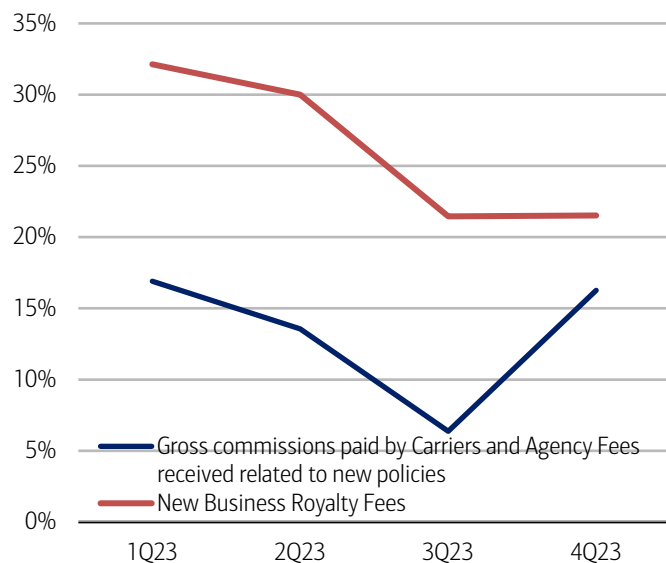
Source: Company filings

BofA GLOBAL RESEARCH

In addition to providing new franchisee productivity data, the company provided investors with new sales production of the corporate agency force delineated between first-year and more experienced agents as well. The changes in the corporate agent count have been more dramatic with the company slashing corporate agent count by 37%/50% (first-year/experienced) from a 4Q21 peak to a 2Q23 trough and then increasing the corporate agency count by 23%/(down) 8% from the 2Q23 trough through year-end 2023. The company has only provided investors with eight quarters of productivity information, but investors can see that in 1Q23, first-year corporate agent productivity surged to a staggering high of 89% as it was slashing agent count. The productivity gains seem entirely denominator induced.

Exhibit 7: Year-over-year change in income statement franchise new business compared with new KPIs on productivity

The new KPIs data, while it indeed does indicate improving productivity (note acceleration in 4Q23), does not seem to translate into an improvement in the related income statement line item (note flat growth compared with 3Q23).



Source: Company filings

BofA GLOBAL RESEARCH

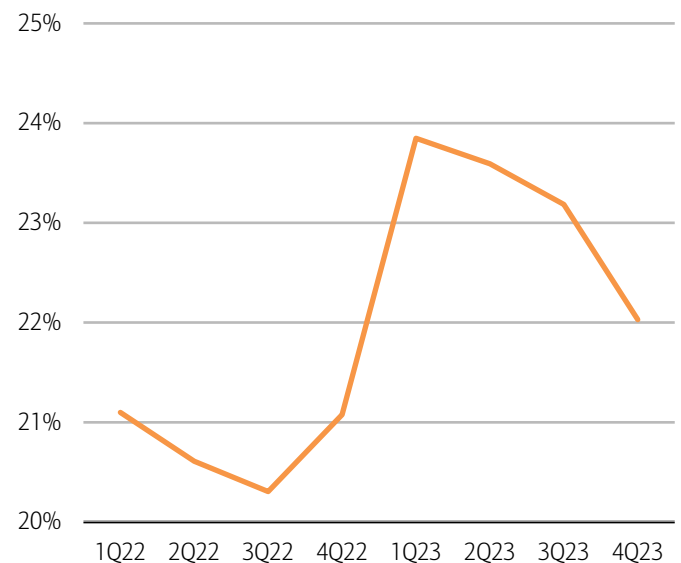
Further, we would note that these productivity statistics do not seem to correspond to production statistics as detailed in the audited income statement. The productivity data details commissions (for franchises) and sales (for corporate agents) per average agent count, which is a number given in the company's KPIs (or at least quarter end agent count is, with average available by dividing the sum of two points in time divided by two. By doing this math, we can compare New Royalty Revenues from the income statement with New Franchise Commissions from the productivity statistics (multiplied by the average agent count).

Management has not responded to our requests for clarification on the seeming non-relationship between the new KPI productivity data and the related revenue items on the income statement. There may be some difference between how the new disclosure was calculated and how we are interpreting it.

Likewise, we can do the same calculations for the corporate agents, comparing sales from the new KPIs and new commissions on the income statement. Doing this produces numbers that do not reflect the trends seen in the revenue lines. We have asked the company to clarify the lack of correlation among these numbers, but management has, so far, been non-responsive. In the case of the corporate agent productivity data, the relationship between sales and revenue seems to bear no relationship whatsoever. We believe this is largely due to the fact that the implied productivity increases are merely a function of changing agent counts (the denominator) and not actual improvements in productivity per active agent, but yet defer to management to educate investors in this regard. It is also possible that the data in these new KPIs might be trailing 12-month data, while we have compared it against quarterly income statement results (and we think this may likely be the case). If so, this would merely serve to exacerbate the problem of a declining agent count giving the appearance of higher levels of productivity, and we would regard the data, at best, as indicting trends that may have since long past.

Exhibit 8: New business royalty fees / "Gross commissions paid by Carriers and Agency Fees received related to new policies"

We would have thought there would likely be some consistency between the growth rate of new business in royalty fees (on income statement) and the new gross commission productivity data supplied with 4Q23 results. However, the two do not seem to bear a relationship to one another.

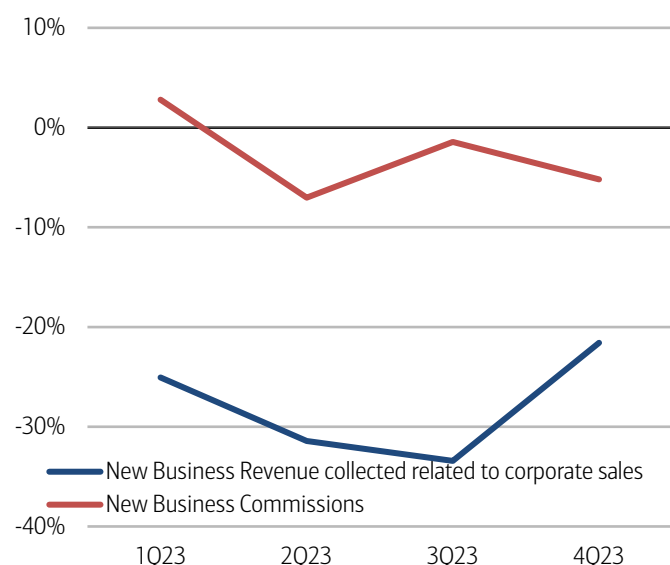


Source: Company filings

BofA GLOBAL RESEARCH

Exhibit 9: Year-over-year change in income statement corporate new business compared with new KPIs on productivity

Similar with the new franchise productivity data, the related corporate agency productivity data does not bear a relation to the related income statement item. We are not confident that this data indicates the potential accelerating revenue production in 2024.

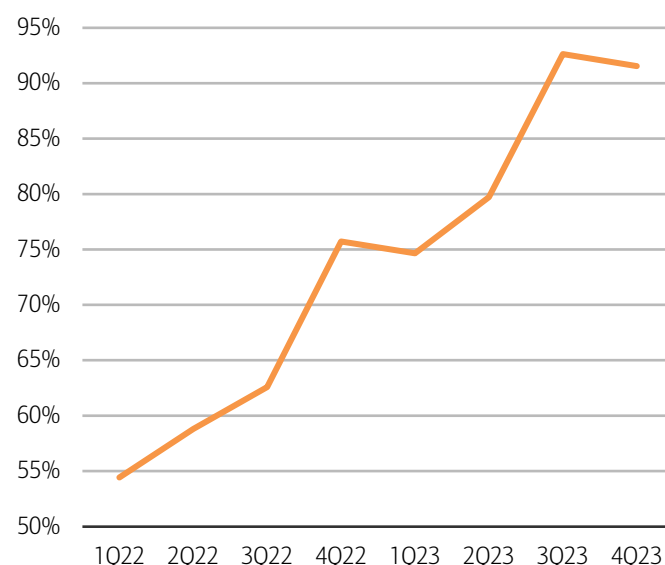


Source: Company filings

BofA GLOBAL RESEARCH

Exhibit 10: New business commissions / "New Business Revenue collected related to corporate sales"

We believe the sharply rising ratio of New business commissions / "New Business Revenue collected related to corporate sales," which corresponds to a sharply declining agency count argues that the productivity improvement may merely be a function of fewer agents (lower denominator).



Source: Company filings

BofA GLOBAL RESEARCH

We believe one more comment regarding this new productivity data is worth noting. A seasoned corporate agent, according to the KPI data, generated approximately \$26 million in new sales (in the 4Q23 data), while a seasoned franchise generated approximately \$21 million in new commissions. The company has embarked on a project of converting its best performing corporate agents into franchisees and flags that as a key ingredient in rising productivity. An enterprising former corporate agent is immediately better at generating new business than a neophyte Goosehead agent and potentially can rival a seasoned franchises producer. The makes sense entirely.

By converting its best corporate producers to franchises, Goosehead may be losing a stream of revenue it formerly controlled in full.

However, the production statistics suggest that seasoned corporate producers (\$26 million) are more productive than seasoned franchises (\$21 million). Further, Goosehead essentially "owns" 100% of the economics associated with a corporate agent's production (including the run-off value of that book if/when the corporate agent departs) as compared with having to share in the economics of a franchises ("owning" just 20% of new business and only 50% of renewal business for as long as the policy is active). From this, we question whether it is indeed beneficial to Goosehead shareholders for the company to be converting its best corporate agents into franchisees.

Cash flow margins appear low and stagnant

In speaking with investors, we have heard the argument that, yes, maybe management is overly bullish about its revenue growth rate. And, yes, it does appear that the company has hit some snags in terms of manufacturing new franchises. And, perhaps even, that margin expansion has not improved at the pace expected. The 4Q23 adj. EBITDA margin of 22.5% also ran below our forecast of 27.9% and consensus of 26.4%. However, some will draw attention to the fact that Goosehead generated \$51 million of operating cash flow in 2023. So, yes, maybe the growth rate isn't 30%, but maybe it is 20%. At a market cap of \$2.8 billion, the stock is trading 55x trailing operating cash flow, which is high, but maybe not so high for a company growing at somewhere around a 20% clip.

We believe investors need to make adjustments to the \$50.8 million in operating cash flow for 2023. First of all, that \$50.8 million does not adjust for \$12.2 million of capital expenditures, which in typical investment shorthand converts cash flow from operations into “free” cash flow: \$38.6 million (73x). Second, the company deferred \$1.5 million in taxes in 2023 that will have to be paid sometime lowering the “free cash flow” number to \$37.1 million: (76x).

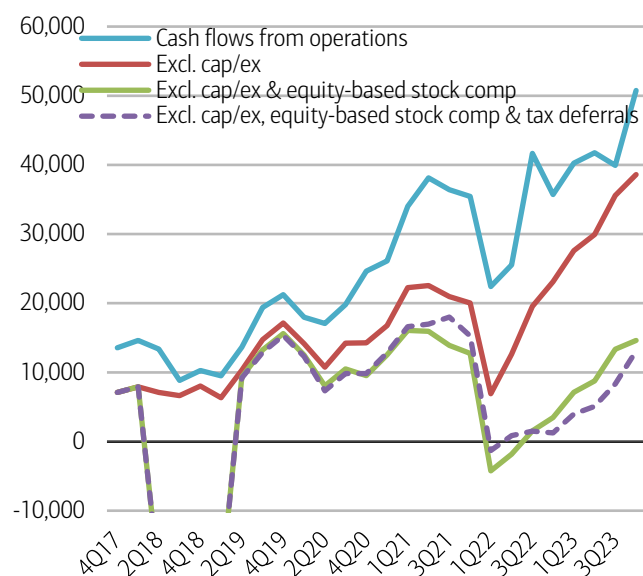
We calculate 2023 “free” cash flow of about \$13 million or 5% of revenues as compared with the company disclosure of a 26.7% “adjusted” EBITDA margin. Non-cash comp hidden in sharecount dilution causes “adjusted” numbers to appear much higher than GAAP numbers.

We would then ask investors to look at one more line on the statement of operating cash flows: share-based compensation. Our view is that share-based compensation has a cost. In the same way that debt issuance might generate cash. No one would call that debt-generated cash flow “free.” The debt will have to be repaid in the future, and share-based compensation merely moves compensation off the statement of operating cash flows onto the statement of financing cash flows. Further, Goosehead management in particular has been very aggressive with hundreds of millions of dollars in stock sales annually, such that one might be forgiven for drawing little distinction between share-based comp and cash-based compensation. In 2023, share-based comp totaled \$24.0 million. Investors have experienced sharecount dilution on average of 1.1-1.2% annual over each of the past 4 years (2020-2023). At a market capitalization of \$2.8 billion, annual sharecount dilution of slightly in excess of 1% is equal to over \$30 million annually. We would respectfully ask investors to deduct the GAAP number of \$24.0 million in 2023 share-based compensation to estimate a more accurate view of truly “free” cash flow: \$13.1 million. Our view is that paying a 215x multiple on trailing free cash flow might be a little much, even for a company growing revenue at, say, a 20%ish clip.



Exhibit 11: Cash flow from operations/"Free" cash flow (\$ in '000s)

Significant amounts of share-based compensation give the impression that cash flows from operations have been growing. However, when adjusting out this line item, truly "free" cash flows have essentially stagnated at about \$10mn annually since 2019, despite material increases in the company's size.



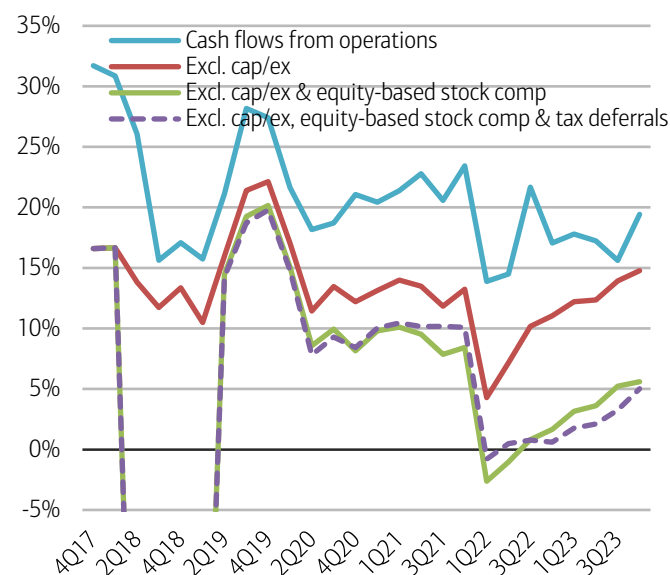
Source: Company filings

BofA GLOBAL RESEARCH

Additionally, we would observe that, as Goosehead grows, that it has not been able to execute on improved margins. We would note that truly "free" cash flow generation dropped sharply in 2022. As a percentage of revenue, it seems as if it has been in decline since 2019, albeit better in 2023 than in 2022. Operating cash flow less cap/ex, deferred taxes and share-based compensation of \$13.1 million on a base of \$261 million in revenues is just 5.0%. We are not arguing that it cannot improve, but this number is so far off from the 20-30% adjusted EBITDA numbers that the company cites in quarterly financials and its 40%+ target that we believe it, at best, is many years away from being anywhere near marrying truly "free" cash flows to this target.

Exhibit 12: Cash flow from operations/"Free" cash flow (as a % of revenues)

2023 revenues of \$261 million compares with \$77 million in revenues in 2019. Truly "free" cash flows as a percentage of revenues have decline precipitously since 2019. That said, 2023 "free" cash flow as a percentage of revenue did improve from a 2022 trough.



Source: Company filings

BofA GLOBAL RESEARCH

Price objective basis & risk

Goosehead Insurance Inc. (GSHD)

Our \$42 price objective is based on discounted-cash-flow analysis using our earnings projections for a 15-20% revenue CAGR through 2028 and a residual growth rate of 10%. The 10% residual growth rate runs ahead of mature large-cap brokers, but smaller outfits have tended to grow more quickly. We select an 12% discount rate to reflect the surge in interest rates beginning last in 2021.

Downside risks are disintermediation of the agency sales model to captives and direct channels as well as declining interest from potential franchisees. Upside risks are acceleration in franchise growth and increased pace of homeownership.

Analyst Certification

I, Joshua Shanker, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Insurance Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Aflac	AFL	AFL US	Joshua Shanker
	Allstate Corp.	ALL	ALL US	Joshua Shanker
	Arch Capital	ACGL	ACGL US	Joshua Shanker
	Assurant	AIZ	AIZ US	Grace Carter, CFA
	Axis Capital	AXS	AXS US	Joshua Shanker
	BRP Group, Inc.	BRP	BRP US	Joshua Shanker
	Cincinnati Financial Corporation	CINF	CINF US	Grace Carter, CFA
	Corebridge Financial	CRBG	CRBG US	Joshua Shanker
	Everest Group Ltd	EG	EG US	Joshua Shanker
	Intact Financial	YIFC	IFC CN	Grace Carter, CFA
	Intact Financial	IFCZF	IFCZF US	Grace Carter, CFA
	MetLife	MET	MET US	Joshua Shanker
	Progressive	PGR	PGR US	Joshua Shanker
	RenaissanceRe	RNR	RNR US	Joshua Shanker
	The Hartford	HIG	HIG US	Joshua Shanker
	Voya	VOYA	VOYA US	Joshua Shanker
	W.R. Berkley	WRB	WRB US	Joshua Shanker
NEUTRAL				
	American International Group	AIG	AIG US	Joshua Shanker
	Aon	AON	AON US	Joshua Shanker
	Brown & Brown	BRO	BRO US	Grace Carter, CFA
	Lincoln National	LNC	LNC US	Joshua Shanker
	Marsh McLennan	MMC	MMC US	Joshua Shanker
	Principal Financial Group	PFG	PFG US	Joshua Shanker
	Prudential Financial	PRU	PRU US	Joshua Shanker
	The Hanover	THG	THG US	Grace Carter, CFA
	Trupanion	TRUP	TRUP US	Joshua Shanker
	Unum	UNM	UNM US	Joshua Shanker
UNDERPERFORM				
	Arthur J. Gallagher & Co.	AJG	AJG US	Joshua Shanker
	Chubb Ltd	CB	CB US	Joshua Shanker
	CNA Financial	CNA	CNA US	Joshua Shanker
	Goosehead Insurance Inc.	GSHD	GSHD US	Joshua Shanker
	Selective	SIGI	SIGI US	Grace Carter, CFA
	Travelers Cos	TRV	TRV US	Joshua Shanker
	Willis Towers Watson	WTW	WTW US	Joshua Shanker



iQmethodSM Measures Definitions

Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

iQmethodSM is the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

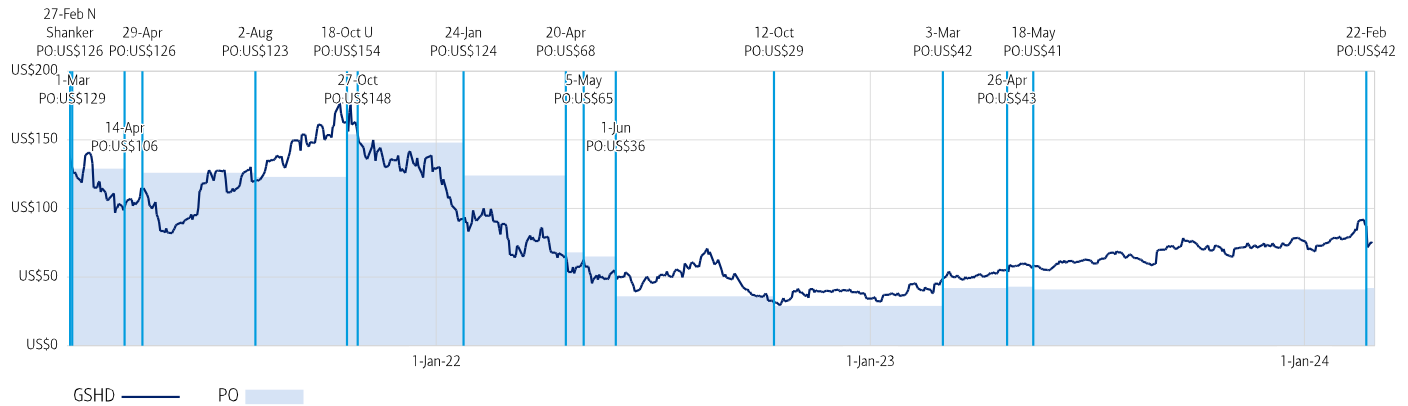
iQdatabase[®] is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash flow statements for companies covered by BofA Global Research.

iQprofileSM, iQmethodSM are service marks of Bank of America Corporation. iQdatabase[®] is a registered service mark of Bank of America Corporation.

Disclosures

Important Disclosures

Goosehead (GSHD) Price Chart



The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Equity Investment Rating Distribution: Financial Services Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	156	53.79%	Buy	94	60.26%
Hold	72	24.83%	Hold	48	66.67%
Sell	62	21.38%	Sell	35	56.45%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. **VOLATILITY RISK RATINGS**, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. **INVESTMENT RATINGS** reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. **Coverage Cluster** is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the [Price Charts website](#), or call 1-800-MERRILL to have them mailed.

BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: Goosehead.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Goosehead Insurance.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Goosehead Insurance.

BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: Goosehead.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.



Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

'BofA Securities' includes BofA Securities, Inc. ('BofAS') and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. 'BofA Securities' is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEDisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSCF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSCF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such



securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BoFA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BoFA or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BoFA or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BoFA Securities, through business units other than BoFA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BoFA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BoFA for the provision of research services for a separate fee, and in connection therewith BoFA may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BoFA has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BoFA). If such recipient uses the services of BoFA in connection with the sale or purchase of a security referred to herein, BoFA may act as principal for its own account or as agent for another person. BoFA is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

BoFA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at [BoFA ESGMeter methodology](#). ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating.

ESGMeter is independent of the BoFA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BoFA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BoFA Securities. BoFA Global Research information is distributed simultaneously to internal and client websites and other portals by BoFA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BoFA Securities.

Materials prepared by BoFA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BoFA Securities, including investment banking personnel. BoFA Securities has established information barriers between BoFA Global Research and certain business groups. As a result, BoFA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BoFA Global Research personnel's knowledge of legal proceedings in which any BoFA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BoFA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BoFA or any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BoFA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BoFA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BoFA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BoFA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BoFA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BoFA Securities is under no obligation to update this information and BoFA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BoFA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BoFA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BoFA or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BoFA Securities nor any officer or employee of BoFA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

