# Jackson National and Brooke Re: Pay Me Back Whenever

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## Executive Summary

- Jackson National (JXN) is the largest US issuer of variable annuities via its regulated life insurance subsidiary Jackson National Life (JNL). Although Jackson's core VA book has been shrinking, its capital return to shareholders has more than doubled since 2023, enabled by its captive reinsurer Brooke Re (Figure A). Management has given scant disclosure of Brooke Re's finances or operating mechanics. However, important additional detail is available in JNL's separate statutory financial statements.
- Our analysis indicates that JNL has an enormous exposure to Brooke Re, that Brooke Re faces significant liquidity and solvency challenges, and that Jackson's capital return pace is likely unsustainable.

***Liquidity***

- Jackson presents Brooke Re as an enabler of free cash flow and "free capital generation" at JNL, but the gains that Brooke Re enables are largely non-cash. On a cash basis, JNL has not only failed to timely receive the results of the reinsurance economics owed by Brooke Re, but has, by our work, paid cash to Brooke Re. As of 2Q 2026, JNL had accumulated a net receivable from Brooke Re of $6.8B, or ~137% of JNL's surplus (Figures B, C).[1] For scale, JXN's market capitalization is approximately $9B. We cannot find any other US life insurer with this magnitude of receivable exposure (Figure D).
- The receivable stems from an unusual, off-market derivative settlement mechanism between Brooke Re and JNL, where hedge results for a given quarter are settled over a three-year period. This settlement mechanism is shown only in JNL's statutory filings and is never discussed in any GAAP financials or earnings calls. If Brooke Re cannot service this receivable, JNL will face a significant capital deficit.
- The Brooke Re transaction transferred the bulk of the risk in JNL – the variable annuity market guarantees and their hedges – but only a small fraction of the assets. Brooke Re began with only $700MM of hard assets to hedge a ~$175B variable annuity book. Based on disclosures in the statutory financials, we calculate that Brooke Re has less than half the liquid assets needed to service its payable to JNL and insufficient capital for the risks it assumed.

***Solvency***

- Although statutory statements are not available for Brooke Re (as is typical for captive reinsurers), we believe that Brooke Re's capital will likely prove insufficient to meet its obligations to JNL.
- Brooke Re has offset large hedge losses – losses that without question exist – with a large (~$5B, by our estimation) accounting markup of the assumed value of the future guarantee fees ceded to it (the "market risk benefit" asset or "MRB"). This is a modeled gain on an asset with no observable trading price, with a value highly sensitive to assumptions about policyholder behavior.
- Jackson's own disclosures show that the company has consistently misestimated this behavior, leading to regular quarterly markdowns. Jackson has marked down the MRB in every one of its annual actuarial reviews since being a public company. Even with these model recalibrations, its model has erred on the side of overoptimism regarding policyholder behavior in 15 of the last 15 quarters, averaging over $500MM annually of realized quarterly losses separate and apart from the annual actuarial reviews.

[1] Figures B and D show the line 16.3 (or line 16.3 - line 9.3) receivable across all counterparties; Figure C shows this receivable for Brooke Re only.

- We believe that even after these markdowns, Jackson is substantially overvaluing the MRB by failing to fully update its lapse/utilization assumptions for observed behavior. Brooke Re's total equity is ~$2.3B (including Hickory Re). We estimate that Jackson is overvaluing the MRB by ~$2B (range $1.8B-$3.0B), so that Brooke Re has only slightly positive or negative net equity.
- Jackson faces a difficult choice: if it keeps the Brooke Re structure, more than the entire surplus of JNL depends on a receivable from Brooke Re – something that lenders, rating agencies, or regulators may not tolerate indefinitely. Yet it also cannot practically unwind the Brooke Re structure: reconsolidating Brooke Re into JNL would, by our estimation, leave JNL deeply undercapitalized.
- In either event, Jackson's current path of escalating capital return to shareholders each year by growing JNL's receivable from Brooke Re strikes us as highly unsustainable. Far from emitting more capital, we believe that Jackson needs to retain – or even raise – capital to support Brooke Re.

**Figure A**

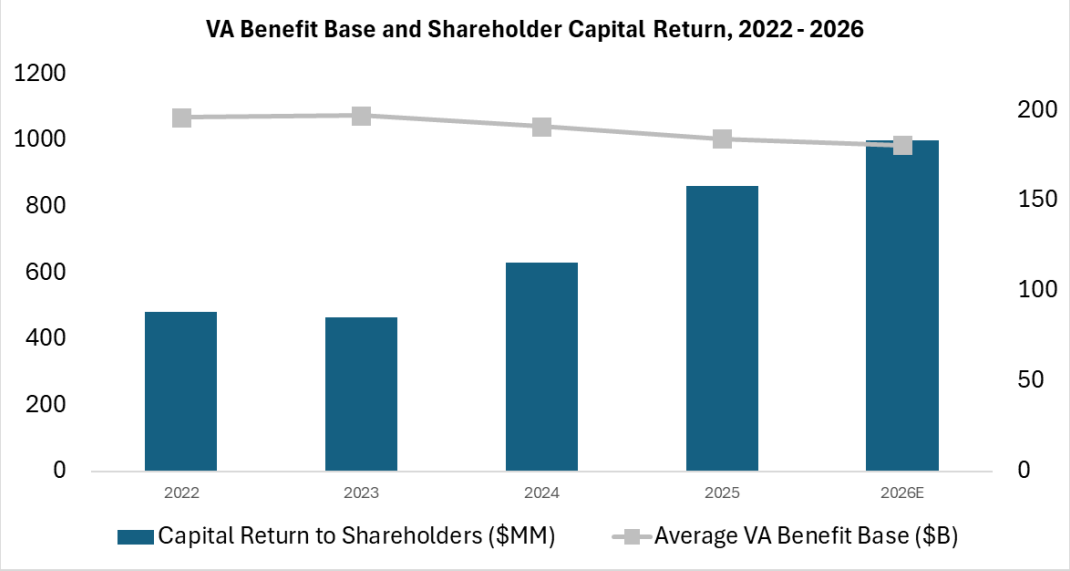



**Figure B**

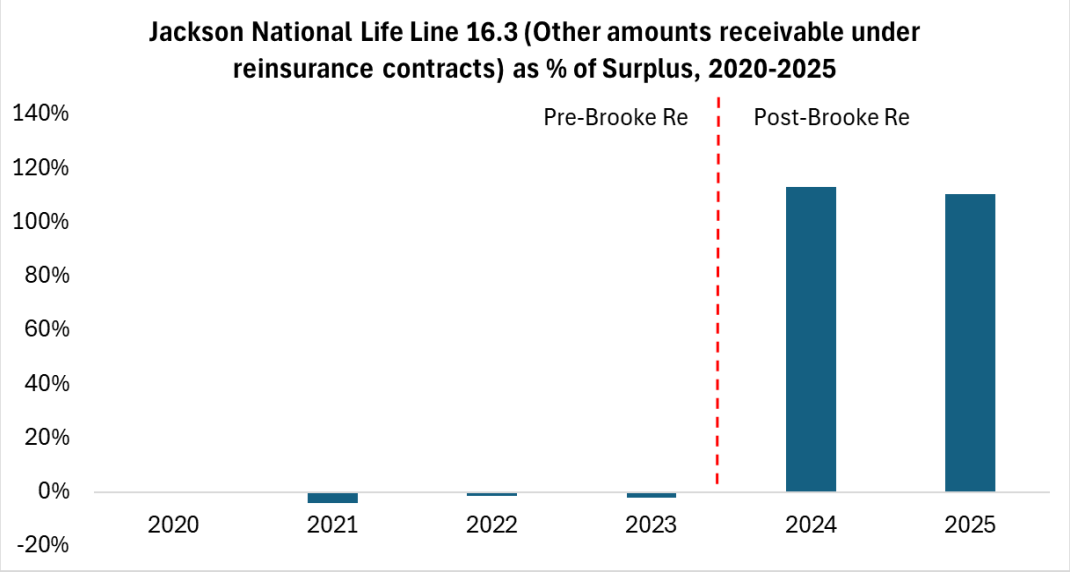


**Figure C**

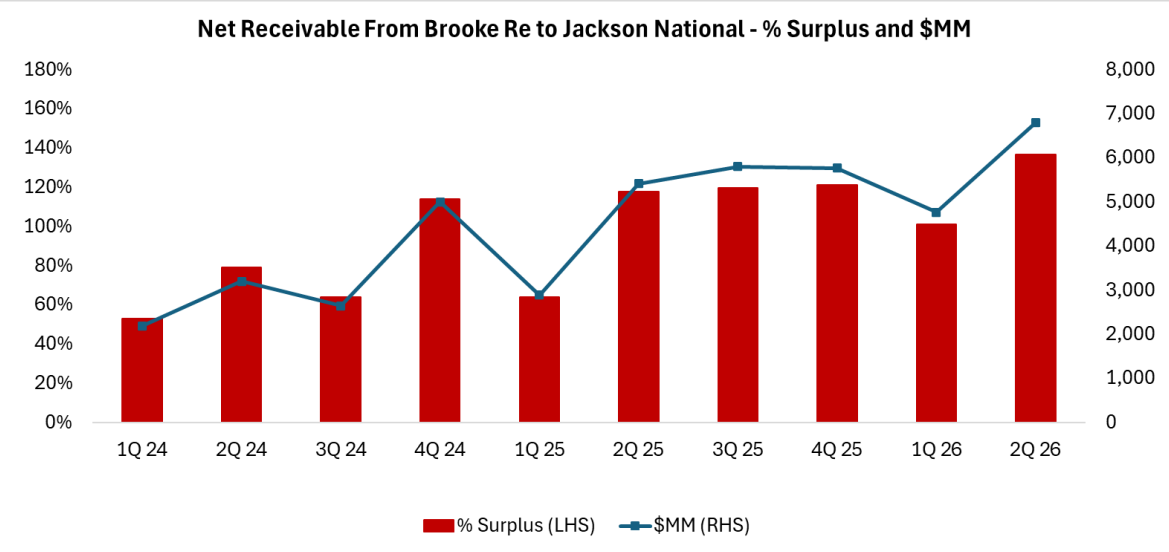
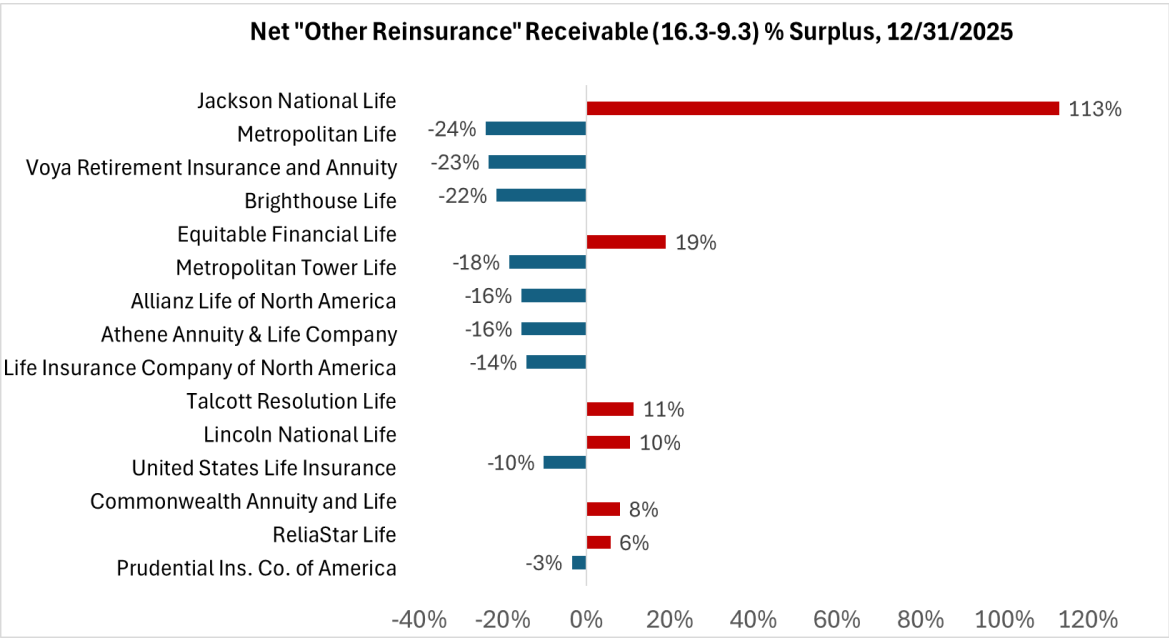



**Figure D**



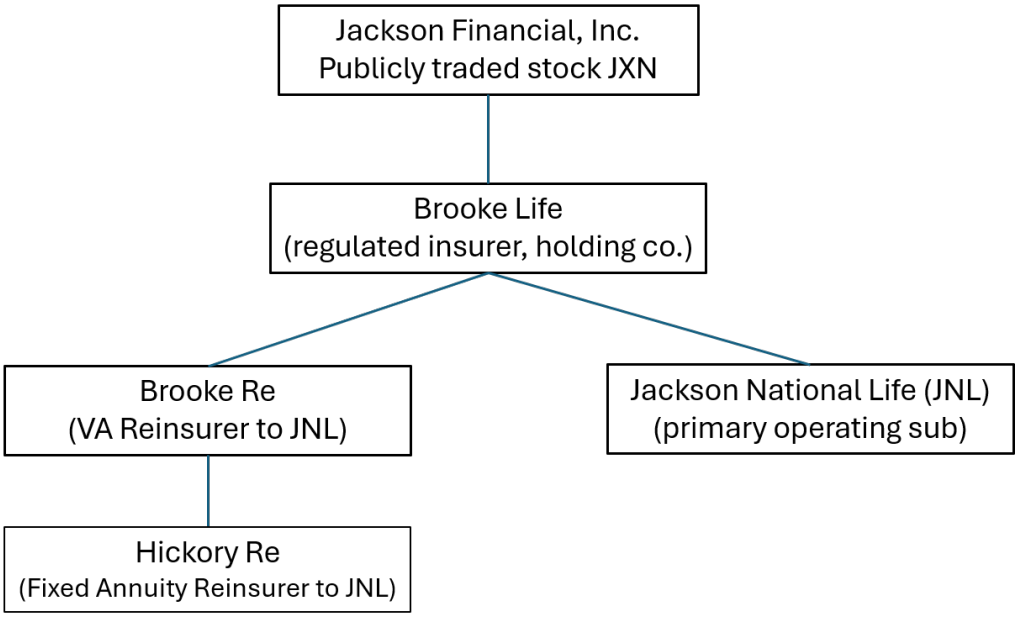

## What is Brooke Re and Why Did Jackson Create It?

### Capital Return to Public Shareholders Depends on the Regulated Insurance Company's Surplus

Jackson Financial Inc. is an NYSE-listed company whose shares trade under the ticker JXN. JXN is a holding company, so distributions to shareholders depend on distributions from its primary operating subsidiary Jackson National Life Insurance Company (JNL). Figure 1 shows the simplified corporate structure. In order for public shareholders to receive the capital generated by JNL, JNL first pays dividends to its owner Brooke Life;[2] Brooke Life passes some or all of these proceeds to its owner JXN; these proceeds are then passed to shareholders.

[2] Brooke Life is also the parent of Brooke Re. It has de minimis insurance operations but is a regulated insurance company.

**Figure 1: Simplified Corporate Structure**




JNL has two key limits on its dividend capacity:

1 - Regulatory approval. Without regulatory approval, JNL can pay annual ordinary dividends equal to the greater of (a) 10% of its statutory surplus as of the preceding year end and (b) statutory net income excluding net realized investment gains. Dividends in excess of this level ("extraordinary dividends") require approval from the Michigan Director of Insurance, which was granted in 2024 and 2025. Dividends for 2026 are also expected to be extraordinary.

2 - Self-imposed limits. JNL has a risk-based capital target: the RBC ratio (the ratio of total adjusted capital (TAC) to "company action level" capital) should exceed 425% (400% or higher is relatively standard across the US life insurance industry with some variation based on strategy/business mix).[3] This ratio stood at 538% at 2Q 2026.

In both cases, surplus stability is a key driver of JNL dividend capacity, and, as we will see shortly, a key motivation for the Brooke Re transaction.

<u>What are VAs and Why Do They Require Hedging?</u>

JNL's primary business is variable annuities (VA): at year-end 2025, out of $287B of total customer account values, $243B were variable annuity products, which typically carry complicated hedging risks for the insurer. In these products, insured individuals (policyholders) pay premiums that are invested, typically in equity funds or balanced funds as a separate account; the policyholder is entitled to the asset value and related performance after subtracting fees and other expenses. At some later date, after the premiums have accumulated and appreciated, the individual can begin withdrawing up to a maximum annual percentage of the asset value (often 5%); insurers call such partial withdrawals "utilization". The

[3] When TAC reaches the company action level, an insurer must submit a corrective plan to its regulator.

policyholder can also withdraw the full value of the account without any penalty after a waiting period (typically 6 to 8 years), resulting in the policy "lapsing" (also called "surrender" of the policy).[4]

Jackson's VA book tilts heavily towards equities: as of year-end 2025, 72% of account value was invested in equity funds, and another 18% was in balanced funds. The value of an account will fluctuate with the market, so the policyholder may be anxious that the account value could fall. Insurers, including Jackson, therefore offer VAs with market guarantees. These guaranteed VAs feature a "benefit base", which is a notional value that governs the level of withdrawals. For a fee (typically ~1.5% of the benefit base), policyholders can guarantee that the benefit base cannot go down, even if the account value goes down, and that they will be able to make minimum annual withdrawals for life (e.g., 5% of the benefit base) once the withdrawal period starts. For instance, the benefit base and the account value may both start at $100 and then appreciate together to $120. If the account value subsequently falls back to $110, the benefit base will stay at $120. The benefit base typically resets (upwards only) quarterly or annually.

A large portion of JNL's VA book features these guarantees. At year-end 2025, 72% of JNL's variable annuity account value was in a product called "GMWB [Guaranteed Minimum Withdrawal Benefits] for Life," where the customer is guaranteed a fixed annual percentage (e.g., 5%) of the benefit base during his lifetime. This guarantee creates market exposure for JNL: the 2025 10-K notes (emphasis added) that, "*These benefits guarantee minimum payments based on a fixed annual percentage of the benefit base.* ***These withdrawals may continue even if the account value subsequently falls to zero. When equity markets decrease, we generally expect account values to decline, and the account value therefore to be able to fund relatively fewer guaranteed withdrawals****. Conversely, increases in equity markets generally increase account values and extend the number of withdrawals the account value is able to fund.*"

JNL (like other VA issuers) hedges two primary risks. First, the guarantee of the benefit base (which can only rise, not fall, due to market movements) means that JNL is short a put whose strike keeps moving up over time. JNL therefore shorts equities via futures, total return swaps, and puts, which lose money when the market rises. As noted in the 3Q 2025 conference call, "*higher equity markets typically result in losses on our [JNL's] variable annuity hedges*." Second, if the account value is depleted and Jackson must pay out on a guarantee, this payout is a long-dated liability. To hedge the interest rate risk in this position, JNL has long-duration positions in long maturity instruments (e.g. 15 to 20-year Treasury strips).

Statutory Accounting and Hedging's Impact on Statutory Capital

This brings us to the motivation for Brooke Re and the interrelationship between GAAP accounting and (more conservative) statutory accounting. Insurers in the United States are primarily regulated by the states, not the federal government, through a regulatory framework developed by the National Association of Insurance Commissioners (NAIC). One of the NAIC's key responsibilities is the promulgation of a comprehensive body of accounting principles specific to regulated insurers, known as "statutory accounting". Each individual insurance company licensed to write business in a state is required to file statutory financial statements with its state regulator which are publicly available, except for those of captive reinsurers which are typically permitted to file confidentially. Certain jurisdictions,

[4] Typically, the surrender charge is a percentage of the premium which steps down over time (e.g. 8-8.5% initially, stepping down annually and reaching 0% after 5-7 years). It is usually separately applied to each contribution to a VA account, meaning for a policyholder that has made multiple contributions his or her balance can include assets subject to different surrender charge periods.

including Jackson's primary regulator, Michigan, further permit captives to prepare their financial statements in accordance with GAAP with modifications approved by the regulator instead of statutory accounting rules. Jackson thus files statutory statements for JNL that are publicly available in addition to the consolidated GAAP financials filed by JXN as a publicly-listed company. Brooke Re, in contrast, files modified GAAP financials with the Michigan insurance regulator that Jackson does not make publicly available.

Because JXN is a holding company and JNL its primary operating subsidiary, JXN's ability to return capital to shareholders generally depends on dividends from JNL. JNL's dividend capacity is in turn governed by its statutory capital – not its GAAP capital. Under both statutory and GAAP accounting, derivative value changes, whether realized or unrealized, go through surplus (equity). However, in statutory accounting, the guarantees on the VA book cannot always get marked in a way that offsets hedge losses. Consider two distinct cases:

1 – when the guarantees are in-the-money from a policyholder's perspective (i.e. when Jackson is expected to have to pay out on its guarantees). In this case, Jackson holds reserves for these payments; when the market rises, Jackson can release these reserves, offsetting hedge losses.

2 – when the guarantees are at- or out-of-the money from the policyholder perspective (i.e. when the guarantees are less likely to be drawn). In this case, Jackson may be holding very little reserve against the guarantee. If the market rises further, there will eventually be no further reserves to release, and, importantly, **statutory accounting does not allow a negative reserve**. In this situation, JNL loses money on its hedge, but does not have sufficient offsetting reserve releases (gains), and surplus decreases. The prohibition on negative reserves is the so-called "cash surrender value floor" – the requirement that the liability booked for a variable annuity can never be less than the cash surrender value of the policy.[5]

This mismatch between statutory accounting on hedges and reserves was the central motivation for the creation of Brooke Re: in the 2Q 2023 conference call, JXN management noted that, "*...statutory reserving and capital requirements are subject to flooring at the cash surrender value…we are actively engaged with our Michigan regulator and are optimistic we will develop a long-term reserves and capital solution that will better reflect the economics of our business and facilitate more efficient risk management*."

## The Initial Brooke Re Transaction

In the 4Q 2023 conference call, management announced the formation of Brooke Re, a Michigan captive reinsurer owned by Brooke Life (Figure 1). On January 1, 2024, JNL entered into a reinsurance arrangement with Brooke Re:

[5] As an example, consider 1Q 2023, when the S&P 500 rose 7%. During the conference call, management noted [emphasis added] that, *"We experienced flooring during the first quarter as equity markets rose, which... drove **elevated losses on hedges that were not offset by reserve releases**. The healthy cash flows embedded in the book still remain. However, **statutory rules limit the ability to reflect the full economic value** in our results due to the conservatism in the CSV floor."* The statutory financials show that, beginning with a $5.97B surplus, JNL paid $600MM in dividends to its parent Brooke Life, and lost $1.14B in operations, ending with a $4.24B surplus. The statutory financials do not break out the entire derivatives loss, but the consolidated GAAP financials show a loss on freestanding (i.e. non-embedded) derivatives of $2.512B.

"*Through the coinsurance agreement executed in January, the in force and future VA guaranteed benefits are transferred to Brooke Re while the VA base contract remains at JNL…JNL will execute the hedging of these guarantees on Brooke Re's behalf and will transfer the hedging gains and losses to Brooke Re through a coinsurance agreement, along with future fees collected, benefits paid, and an allowance for expenses.*"

That is, the complex policyholder guarantees (and the associated fees and benefits that policyholders pay and receive), as well as their hedges, economically move over to Brooke Re. In order that Brooke Re does not have the same statutory accounting problem that JNL had (the cash surrender value floor), Brooke Re received approval from its regulator, the Michigan Department of Insurance and Financial Services, to use modified GAAP accounting. Management noted on the same call that "*modified GAAP reserves are always responsive to market movements, as are the related hedge assets*."

The GAAP framework allows Jackson to, in effect, carry a negative reserve for its VA guarantees when the guarantees are out of the money (again from the policyholder's perspective). The concept here is that when the guarantees are out of the money, the guarantee fees paid by policyholders, on average, will exceed the expected future guarantee payouts – so Jackson should be able to capitalize this future gain, just as it reserves for future losses when the guarantees are in the money. The desire for a symmetric accounting treatment is not unreasonable. However, it is also understandable why statutory accounting prohibits these negative reserves. The negative reserve is an estimate of future profitability of a policyholder, but that policyholder has the right to leave at any time (lapse the policy by stopping payment of guarantee fees) or commence withdrawals under the policy after a set period of time, reducing the amount of fees that are included in the estimated future profitability. As an analogy, a bank may have a longtime, profitable customer with a deposit balance of $100 who is estimated to produce $25 of profit in the future. The cash surrender value floor prescribed by statutory accounting is analogous to the requirement that the bank holds the deposit liability at $100, not $75, because $100 is what is owed if the customer leaves.

Management refers to Brooke Re as a "self-sustaining" captive and chose (by their own estimation) to capitalize it at a level that would sustain a 98th percentile stress scenario. Brooke Re was capitalized with $699MM in initial cash and liquid securities – what management calls "hard assets."[6] However, JXN management often refers to the total initial equity of Brooke Re as $1.9B, which is the $699MM of capital contributed plus the MRB ("market risk benefit") value (the estimated GAAP value of the guarantee business) of $1.17B – the $1.17B is the "negative reserve" at the time of formation. Importantly, the $1.17B MRB is not a liquid asset: it is an estimate of the present value of the guarantee block over time. Only the $699MM of hard assets were directly available as resources to pay JNL.

As a preview of what is to come, we emphasize that the MRB value is highly model dependent and sensitive to assumptions about policyholder behavior. It is well known that pre-financial crisis vintages of guaranteed variable annuity products made overoptimistic assumptions about policyholder behavior.[7]

[6] The flow of funds is somewhat complicated. JNL first paid a dividend of $1.92B to its parent, Brooke Life; Brooke Life then sent $1.87B to Brooke Re; Brooke Re then paid a ceding commission of $1.17B to JNL to acquire the VA guarantee business. On net, JNL paid out $749MM ($1.92B - $1.17B), and Brooke Re received $699MM ($1.87B - $1.17B).

[7] For instance, Equitable has segmented its VA portfolio into a "core" and "legacy" business. The legacy business consists of pre-2011 vintages, which the company notes "was priced and designed under conditions prior to the

Perhaps this is why one analyst commented that the guarantee asset "*doesn't really feel like real equity.*"[8] If profitable policyholders leave more rapidly than expected, the asset value will be impaired. As we discuss later, Jackson has in fact experienced greater than expected policyholder surrenders (lapses) and utilization, which has led to continuous markdowns of the guarantee asset.

## Analysts Frequently Ask For More Detail on Brooke Re

Since Brooke Re does not file public financials, analysts have, over time, asked for additional disclosure about Brooke Re's capital position, hard assets, and the possibility of Brooke Re requiring additional capital support.

1Q 2024 (KBW): "*...on Brooke Re…we have the GAAP hedging results, but can you give us a little bit more color on kind of what happened within Brooke Re given some differences between GAAP and the accounting in Brooke Re…as well as…what the capital position within Brooke Re did?*"

2Q 2024 (Evercore): "*...A couple questions on hedging and Brooke Re…can you just comment on what are the actual hard assets that are currently capitalizing Brooke? ...And can you mention your capital levels there? Do you have a buffer over what you target?*"

3Q 2024 (KBW): "*...on Brooke Re. Can you provide us a little more color on, or quantification on, how the capital has moved at Brooke Re on a year-to-date basis at this point?*"

4Q 2024 (Jefferies): "*One of the questions that we get most often from investors is how do you get comfort that Brooke Re is well capitalized? And I take your comments on the call, but is there something that you guys could sort of provide us on a more regular basis that we can sort of anchor to? Just, it seems to be some reluctance in terms of providing additional disclosure on Brooke Re. And since it's such an important part of your strategy, I'm wondering if there's something that you guys could give us on a more regular basis that we can use to track the performance there*."

These questions persisted throughout 2025:

4Q 2025 (Jefferies): "*...in terms of the capital levels [of Brooke Re]...you've kind of given us a qualitative sort of framework for how you think about the minimum capital…is there any way you can kind of give us a little bit more of a target so we can track this over time?*"

4Q 2025 (Evercore): "*...can you update us on what the hard assets are in Brooke Re at this point?*"

As to the last question, management stated, "*I'm not going to give you the exact number, but I would just say that the $700MM has grown pretty significantly…that's kind of the standalone VA piece*."

2008 global financial crisis and is materially different from our current product offering." We assume that when originated, Equitable thought this business would be profitable. However, as of year-end 2025, gross of reinsurance, Equitable valued its legacy MRB as an $8.6B net liability.

[8] Evercore analyst, 3Q 2024 conference call transcript.

## JNL's Statutory Financials Reveal a Different Picture of Brooke Re

Despite over two years of analyst requests, JXN's management has never fully quantified the capital or hard asset evolution of Brooke Re, the mechanics of the coinsurance and derivatives arrangements, or the exposure of JNL to Brooke Re. Rather, they have repeated that Brooke Re is "self-sustaining" and that they have "95% confidence that we could withstand a wide range of market scenarios."[9]

JNL's statutory financials, however, shed considerable light on these issues and show a picture that we find far more worrisome.

### Brooke Re / JNL Reinsurance Agreement

We will now walk through the detailed mechanics of the Brooke Re / JNL relationship step-by-step using JNL's 1Q 2024 statutory filing.

1 - Even though Brooke Re absorbs the economics of the VA guarantee business and its associated hedges, JNL continues to be the counterparty of record for all the hedges for the VA guarantee book. The JNL 1Q 2024 statutory filing states that "*Jackson is responsible for the maintenance of Brooke Re's hedging program, including all hedge administration, subject to hedging guidelines established by Brooke Re. Jackson enters into any hedges as principal and makes any payments to counterparties, including any required hedge collateral, from its own accounts*." Practically, this means that JNL continues to post variation margin to counterparties daily.[10]

2 - At the end of each quarter, Brooke Re and JNL calculate what each party owes the other. Brooke Re absorbs any hedge losses (or gains) that JNL took on as the hedge counterparty of record – i.e. Brooke Re owes JNL the amount needed to zero out JNL's hedge result for the quarter (and this amount could be positive or negative). JNL owes Brooke Re the net result of the VA guarantee business that quarter – i.e. the sum of the guarantee fees received from policyholders less certain expenses. For example, if JNL lost $120 on hedges in a quarter, and the VA guarantee book made $40, then Brooke Re would owe JNL $120 for the hedges, and JNL would owe Brooke Re $40 for the guarantee book economics.

3 - Very importantly, the quarterly hedging amounts owed from Brooke Re to JNL are not settled immediately in cash, even though JNL posts margin daily. Not only does JNL calculate variation margin only quarterly with Brooke Re, but also, the quarterly hedge amount owed (the $120 in the example above) is only paid over a **three-year period**. As the statutory filings again note,[11]

"*The funds withheld coinsurance agreement includes settlement provisions for net hedge results between Jackson and Brooke Re over a **twelve quarter period** with the first quarterly net hedge result amount being allocated to the current quarterly settlement period and each of the remaining eleven*

[9] 2025 4Q conference call.

[10] From 2025 10-K: "*Volatile market environments have the potential to increase hedging-related liquidity requirements, as the amount of cash we need to pay out in variation margin **each day** is directly related to the magnitude of equity market and interest rate movements and the size of our current positions in those instruments*." From 2025 statutory filing: "*Futures transactions are effected through regulated exchanges and positions are marked to market and settled in cash on a **daily basis**.*" [emphasis added]

[11] This language appears in the 1Q 2024 - 4Q 2024, 4Q 2025, and 2Q 2026 statutory filings, but is not present in the 1Q 2025, 2Q 2025, 3Q 2025, or 1Q 2026 statutory filings.

*quarterly net hedge result amounts being deferred and allocated to subsequent quarterly settlement periods*." [emphasis added]

In the example above, where Brooke Re owed JNL $120 for hedge losses incurred that quarter, only $10 would be paid that quarter, and the remainder would be paid over the next 11 quarters. In this example, JNL would book a receivable for the unpaid amount of $110, and that receivable would amortize over the next 11 quarters. We have never encountered a margin arrangement like this, with quarterly mark-to-market and a 12 quarter "installment plan" to pay variation margin. The 2Q 2026 statutory financials state for the first time that there is interest charged on the receivable, but the interest rate and amounts owed are not disclosed.

We can check that the statutory financials enforce this 12-quarter mechanic. The 1Q 2024 statutory financials disclose that, "for the quarter ending March 31, 2024, net hedge results were $(2,846,115,830)," meaning that Brooke Re owes JNL $2,846,115,830 for the hedges. From the above, 1/12 of this amount should be settled, and 11/12, or $2,608,939,511 should be booked as a receivable. Figure 2 below shows that a receivable of $2,608,939,510 – within $1 of the calculated figure – was indeed booked.

**Figure 2: Hedge receivable from 1Q 2024 JNL Statutory Financials**

| Assets | | Balance as of March 31, 2024 |
|---|---|---|
| 16.3 | Other amounts receivable under reinsurance contracts | $ 2,608,939,510 |

Source: JNL 1Q 2024 statutory financials

Despite our diligent search, we were unable to find any discussion of this 12-quarter settlement mechanic in the GAAP financials (10-Q/10-K), earnings call presentations, or earnings calls. It is only described in the statutory financials. The closest reference is CFO Don Cummings' statement in the 3Q 2024 conference call: "*Each quarter, we **settle up** on the results of the business with Brooke Re*" [emphasis added]. We find the phrase "settle up" unsatisfactory. "Settling up" in normal parlance – e.g. settling up a bill at a restaurant – means paying 100% of what is due; "settling up" the derivatives receivable between JNL and Brooke Re here means paying 1/12 of what is due.

4 - Furthermore, the 1/12 of the quarterly hedge result that Brooke Re owes JNL is not paid in cash but rather offset against the monies that JNL owes for the insurance payment. The lower half of Figure 3 below shows that during the quarter, the guarantee business that JNL has ceded to Brooke Re made $644,963,626 (line 29). Brooke Re owes JNL 1/12 of the hedge result of $2.846B = $237,176,319; so, on net, JNL should owe Brooke Re $407,787,307. This is within ~1% of the line 9.3 ("Other amounts payable on reinsurance") payable that JNL shows on its balance sheet of $412,039,134. The following quarter's statutory financials indicate that this payable was settled post quarter-end, increasing Brooke's "hard assets."[12]

[12] The 2Q 2024 statutory financials show a transfer of $419MM of debt securities to Brooke Re for reinsurance settlement.

**Figure 3: Liabilities and Summary of Operations from 1Q 2024 JNL Statutory Financials**

| Liabilities, Surplus and Other Funds | | |
|---|---|---|
| 9.3 Other amounts payable on reinsurance | $ | 412,039,134 |
| 24.07 Funds held under coinsurance | | 120,137,210 |

| Summary of Operations | Initial Impact of Reinsurance Agreement | Quarter Ended March 31, 2024 | Total |
|---|---|---|---|
| 1. Premiums and annuity considerations for life and accident and health contracts | $ (119,431,726) | $ — | $ (119,431,726) |
| 3. Net investment income | — | 705,485 | 705,485 |
| 6. Commissions and expense allowances on reinsurance ceded | 1,170,900,000 | 17,423,435 | 1,188,323,435 |
| 8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts | — | (739,581,394) | (739,581,394) |
| 9. Total revenue | 1,051,468,274 | (721,452,474) | 330,015,800 |
| 12. Annuity benefits | — | (52,904,457) | (52,904,457) |
| 17. Interest and adjustments on contract or deposit-type contract funds | (10,208,102) | 224,454 | (9,983,648) |
| 19. Increase in aggregate reserves for life and accident and health contracts | (109,223,624) | 18,139,637 | (91,083,987) |
| 2702. Interest on funds withheld treaties | — | 705,485 | 705,485 |
| 2703. Reclassification of ceding commission to surplus | 1,170,900,000 | — | 1,170,900,000 |
| 2704. Amortization of gain on reinsured business to income | — | (42,653,967) | (42,653,967) |
| 28. Total expenses | 1,051,468,274 | (76,488,848) | 974,979,426 |
| 29. Net gain from operations before dividends to policyholders and federal income taxes | $ — | $ (644,963,626) | $ (644,963,626) |

Source: JNL 1Q 2024 statutory financials

To close this section, we underscore four points.

First, the sense in which JNL has "hedged" its exposure with Brooke Re is very unlike the meaning of "hedged" in normal derivatives market practice. If Goldman Sachs has a derivative position facing Citibank, and the opposite position facing Morgan Stanley, market participants would agree that Goldman is hedged: on a given day, Goldman may pay variation margin to Citi, but it receives equal variation margin from Morgan Stanley, so its exposure is covered with cash. In contrast, JNL, in its first quarter of operations 1Q 2024, lost $2.846B in hedges and posted collateral to its counterparties – but JNL received only 1/12th of this amount in cash from Brooke Re, and booked the other $2.61B as a receivable. This receivable is far greater than either the $699MM of "hard assets" that Brooke Re had at inception or the ~$1.1B of pro forma hard assets with settlement of the $412MM line 9.3 payable.

Second, the flow of cash between JNL and Brooke Re is the opposite of what one would expect. Economically, in 1Q 2024, JNL should have received a payment from Brooke Re of ~$2.2B ($2.846B hedge result - $645MM insurance result). But because 11/12$^{th}$ of the hedge result is deferred, and the insurance result is paid timely, instead of receiving the ~$2.2B owed, Jackson actually paid Brooke Re ~$412MM. We will revisit this effect shortly when we look at the total effect of Brooke Re over time.

Third, the 12-quarter amortization applies to each quarter's hedge result, so if there are multiple quarters of negative hedge results, the amounts of amortization that Brooke Re owes will stack, eventually causing Brooke Re to pay out more hard assets than it is receiving. For example, suppose that Brooke Re lost $120 in each of four successive quarters. In 1Q, the amortization payment would be 1/12$^{th}$ of

$120, or $10; but in 4Q, it would be 1/12th of the cumulative $480 hedge loss, or $40. After consistent hedge losses, the amortization payments due can overwhelm the insurance monies paid from JNL to Brooke each quarter, such that the line 9.3 payable will flip from positive to negative. If this were to happen, Brooke Re's hard assets would begin to fall. This is not a theoretical concern, as we discuss shortly.

Finally, we stress that the hedges and their associated profits and losses are simply very large compared to Brooke Re's initial hard assets of $699MM. JNL's hedges (which are passed on to Brooke Re), consist of equity hedges and long positions in long-maturity (~20+ years) US Treasury instruments (strips, futures). Based on both the derivatives disclosures in the statutory financials (schedule DB) and regression analysis of hedge losses over time (Appendix C), we estimate that JNL's typical equity hedge is approximately a $20B short position (i.e., a 1% increase in S&P 500 results in ~ $200MM hedge loss) and that the DV01 of the duration positions is ~$30MM (i.e., a 1 bp increase in long-dated yields ~$30MM hedge loss). These are enormous risks compared to the $699MM of starting hard assets. Indeed, the first-ever quarterly hedge result (loss of $2.846B) was ~4 times the initial hard assets.

## The Brooke Re Net Receivable Has Ballooned and Exceeds JNL Surplus

In 2Q and 3Q 2024, the JNL statutory financials disclosed the year-to-date hedge loss, and one can verify that the line 16.3 hedge receivable exactly matches what is expected from the 12-quarter payment schedule.[13] Unhelpfully, starting in 4Q 2024 (a quarter in which the hedge loss increased by another ~$2.7B (Figure 4)), JNL stopped disclosing hedge losses.

Nonetheless, we can directly observe the evolution of the line 16.3 hedge receivable from Brooke Re (the one where each quarter's result amortizes over 12 quarters), as well as the line 9.3 payable (the one which nets the insurance owed against that quarter's amortization payment). We can thus calculate the implied hedge loss each quarter, since we know the hedge receivable. These items are shown in Figure 4 below; note that the line 16.3 / 9.3 receivable / payable are reported figures, as is the surplus; the implied hedge loss is as reported for 1Q 2024-3Q 2024 but calculated thereafter; a positive number indicates a hedge loss.

**Figure 4: Reported JNL Hedge Receivable from Brooke Re and Net Payable to Brooke Re ($MM)**

| | 1Q24 | 2Q24 | 3Q24 | 4Q24 | 1Q25 | 2Q25 | 3Q25 | 4Q25 | 1Q26 | 2Q26 |
|---|---|---|---|---|---|---|---|---|---|---|
| 16.3 Receivable from Brooke Re | 2,609 | 3,494 | 2,956 | 5,070 | 3,085 | 5,356 | 5,748 | 5,663 | 4,730 | 6,539 |
| 9.3 Payable to Brooke Re | 412 | 287 | 305 | 64 | 191 | -63 | -60 | -112 | -42 | -267 |
| Net receivable (16.3 - 9.3) | 2,197 | 3,207 | 2,651 | 5,006 | 2,894 | 5,419 | 5,808 | 5,775 | 4,772 | 6,806 |
| Surplus | 4,131 | 4,052 | 4,140 | 4,390 | 4,525 | 4,594 | 4,846 | 4,762 | 4,721 | 4,971 |
| Net receivable % surplus | 53% | 79% | 64% | 114% | 64% | 118% | 120% | 121% | 101% | 137% |
| Implied quarterly hedge loss | 2,846 | 1,224 | -217 | 2,657 | -1,574 | 2,927 | 1,142 | 726 | -134 | 2,846 |
| Implied cumulative hedge loss | 2,846 | 4,070 | 3,854 | 6,510 | 4,936 | 7,863 | 9,005 | 9,731 | 9,598 | 12,443 |
| Quarterly insurance result | 645 | 618 | 621 | 598 | 583 | 629 | 613 | 602* | 487 | 719 |
| Cumulative insurance result | 645 | 1,263 | 1,884 | 2,482 | 3,064 | 3,693 | 4,306 | 4,908 | 5,395 | 6,115 |

*Estimated, adjusted for payout annuity reserve credit

[13] For instance, in 2Q 2024, the YTD hedge result was $4,070,428,981. Subtracting the 1Q 2024 hedge result of $2,846,115,830 above, the 2Q 2024 hedge result was $1,224,313,151. We expect that the ending receivable should be 10/12 * $2,846,115,830 + 11/12 * $1,224,313,151 = $3,494,050,247. This is exactly the figure shown in line 16.3 in the 2Q 2024 financials. A similar calculation for 3Q 2024 exactly reproduces the $2,956,111,305 receivable.

We make four further points:

First, the cumulative implied hedge loss is large - totaling $12.4B to date. This is cash that JNL has either paid or posted as collateral to counterparties.[14]

Second, the hedge receivable (line 16.3) ballooned to $6.5B at 2Q 2026; and, as anticipated above, due to the stacking of amortizations from multiple quarters, amortization payments now exceed the ~$600-650MM quarterly insurance payments, causing the payable (line 9.3) to also become a receivable of $112MM at 4Q 2025 and $267MM at 2Q 2026. Said differently, early in Brooke Re's life, hard assets were building each quarter, but now they are draining.

Third, we estimate that from inception to 2Q 2026, Brooke Re owed JNL $12.4B to reimburse cumulative hedge losses, while JNL owed Brooke Re $6.1B for insurance payments, for a net of $6.3B owed to JNL. One would normally expect Brooke Re to remit that $6.3B to JNL. But, summing up all the 9.3 payables, JNL actually net paid cash of $717MM to Brooke Re. It is hard to see how this mechanic –where the entity that is supposed to receive $6.3B actually pays $717MM to its hedge counterparty – is consistent with the standard notions of risk transfer, hedging, or reinsurance.

Fourth, JNL had a net receivable exposure (receivables - payables) to Brooke Re of $6.806B, which is 137% of its surplus.[15] If Brooke Re is unable to pay this amount in full, JNL's surplus will be significantly impaired. Although Brooke Re's initial hard assets have grown during the 2024-25 period, we estimate that they have not grown nearly enough to cover this net receivable, as we now discuss.[16]

## Brooke Re Does Not Have the Hard Assets to Cover the Receivable

As noted above, Jackson management has repeatedly declined to specify the hard assets in Brooke Re. However, we can estimate the rollforward of the hard assets by assuming the settlement of the line 9.3 payable each quarter, since this is the mechanism through which hedge amortization payments and insurance payments settle; we also assume income of 6% (annualized) on the starting assets. Note that this calculation does not include tax or the interest paid on the receivable that Brooke Re owes JNL. If these factors were included, the calculation would likely show a lower hard asset estimate. Additionally, the 6% yield assumption is probably generous, since reported yields on JNL's portfolio are closer to 5%.

Figure 5 shows the results of this calculation, rolling forward the initial hard assets of $699MM, and also highlighting the gap between hard assets (Brooke Re's liquid resources) and the net receivable due.[17] At the end of 1Q 2024, the estimated ending hard assets were $709MM, against a net receivable of $2,197MM, for a gap of ($1.487B). The initial hard assets, by our estimation, grew until 3Q 2025, at which point they start shrinking due to the line 9.3 receivable turning negative (i.e. when hedge

[14] As a cross check, we can look at the GAAP disclosures. The loss on all freestanding derivatives in JXN's 2024 10-K was $5.817B. These derivatives include both hedges for the VA business and other businesses (e.g. RILA, which will tend to have long positions and move the other way). The 4Q 2025 earnings presentation discloses a 2025 loss on VA hedges of $3.013B, for a total of $5.817 + $3.013 = $8.830B - within ~10% of the $9.7B figure in the table. It is plausible that most of this difference is due to the RILA difference.

[15] The 2026 2Q financials also note for the first time a 16.1 receivable from Brooke Re of $72.7MM, which is not included in the $6.806B number above.

[16] Figure 5 does not take into account the ~$1.3B of hard assets added in 4Q 2025, which we will discuss shortly.

[17] We emphasize the word "initial": these exclude the hard assets injected by JNL in 4Q 2025, which we discuss shortly.

amortization payments first exceeded insurance results). At 2Q 2026, we estimate hard assets of $1.918B, against a net receivable of $6.806B, for a gap of ($4.888B). This gap is nearly all of JNL's 2Q 2026 statutory surplus ($4.971B) and is almost as large as its TAC ($5.773B). (Note that table 5(a) excludes the $1.3B of hard assets injected into Brooke Re in 4Q 2025 because, as discussed in the next section, these $1.3B of hard assets are encumbered by $1.3B of liabilities. Even if we added these back in fully, the total hard assets would be less than half of the receivable size.)

**Figure 5(a): Estimated Initial Hard Asset Rollforward for Brooke Re ($MM)**

| | 1Q 24 | 2Q 24 | 3Q 24 | 4Q 24 | 1Q 25 | 2Q 25 | 3Q 25 | 4Q 25 | 1Q 26 | 2Q 26 |
|---|---|---|---|---|---|---|---|---|---|---|
| Starting hard assets | 699 | 709 | 1,132 | 1,437 | 1,764 | 1,854 | 2,073 | 2,042 | 2,013 | 1,931 |
| Settlement of 9.3 payable* | 0 | 412 | 287 | 305 | 64 | 191 | -63 | -60 | -112 | -42 |
| Assumed Income at 6% | 10 | 11 | 17 | 22 | 26 | 28 | 31 | 31 | 30 | 29 |
| Estimated ending hard assets | 709 | 1,132 | 1,437 | 1,764 | 1,854 | 2,073 | 2,042 | 2,013 | 1,931 | 1,918 |
| Net receivable from Brooke Re | 2,197 | 3,207 | 2,651 | 5,006 | 2,894 | 5,419 | 5,808 | 5,775 | 4,772 | 6,806 |
| Gap (hard assets - receivable) | -1,487 | -2,074 | -1,214 | -3,243 | -1,040 | -3,346 | -3,766 | -3,762 | -2,841 | -4,888 |

*We assume the 9.3 payable is settled in cash the following quarter

With such a large receivable to hard asset gap, one might wonder how much bigger the starting hard assets would have had to have been in order to settle the net hedge result in full each quarter, with no receivable. Such a requirement is not harsh: market derivatives practice requires daily settlement in full of variation margin. Figure 5(b) shows this flow, where the initial hard assets are targeted such that at all times, the net result of hedges and insurance proceeds can be settled in full each quarter. We find required starting hard assets of $5.871B – about 8x the actual starting hard assets of Brooke Re. Alternatively, we can repeat the calculation assuming that JNL would allow some level of receivable (and thus some deferral of amounts due to future periods), just not an unbounded receivable as exists under the current arrangement. Suppose we assume that Jackson would allow a 12-quarter amortization on a maximum receivable of $1.25B – still over 25% of its surplus, and an amount far larger than what arm's length derivatives counterparties permit. Even in this case, the initial hard assets required would be ~$4.6B, over 6x what was actually put into Brooke Re.

**Figure 5(b): Estimated Initial Hard Assets Needed to Settle Hedge Results in Full ($MM)**

| | 1Q 24 | 2Q 24 | 3Q 24 | 4Q 24 | 1Q 25 | 2Q 25 | 3Q 25 | 4Q 25 | 1Q 26 | 2Q 26 |
|---|---|---|---|---|---|---|---|---|---|---|
| Starting hard assets | 5,871 | 3,758 | 3,208 | 4,094 | 2,097 | 4,284 | 2,051 | 1,552 | 1,452 | 2,095 |
| Assumed income at 6% | 88 | 56 | 48 | 61 | 31 | 64 | 31 | 23 | 22 | 31 |
| Settlement of hedge results | -2,846 | -1,224 | 217 | -2,657 | 1,574 | -2,927 | -1,142 | -726 | 134 | -2,846 |
| Insurance proceeds received | 645 | 618 | 621 | 598 | 583 | 629 | 613 | 602 | 487 | 719 |
| Ending hard assets | 3,758 | 3,208 | 4,094 | 2,097 | 4,284 | 2,051 | 1,552 | 1,452 | 2,095 | 0 |

## The 4Q 2025 Fixed Annuity Reinsurance Transaction: a Stealth Recapitalization?

The large hard asset gap may shed light on a second reinsurance transaction between JNL and Brooke Re in 4Q 2025. Note that the hard assets in Figure 5(a) have been shrinking the past few quarters: starting in 3Q 2025, the stacked amortization from multiple quarters of hedge losses caused the settlement of the 9.3 payable to become negative (e.g. -63MM in 3Q 2025, -60MM in 4Q 2025).

Perhaps in recognition of the problem of shrinking liquidity, in 4Q 2025, JNL injected additional hard assets into Brooke Re via a new reinsurance transaction. JNL ceded two blocks of payout/fixed annuity business to Brooke Re, freeing $1.27B in reserves. To compensate Brooke Re for assuming this liability of $1.27B, JNL also ceded premiums of $1.19B. Adding a $108MM ceding commission, on net, Brooke

Re took on $1.27B of liabilities and received $1.30B of premiums (hard assets): the transaction was effectively a wash in terms of capital to both parties so the motivation for it was not to obtain capital relief at JNL.[18] We stress that this transaction was not an equity injection: the hard assets are paired off against an essentially equal amount of reserves, so they are "spoken for" to service future liabilities.

The structure of the deal is a departure from past practice. In the original Brooke Re transaction on 1/1/2024, for which JNL has ~$148MM of reserve credit at year-end 2025, no assets changed hands to establish these reserves: Schedule S of the statutory financials shows that this reinsurance was done on a "funds withheld" basis, meaning that the assets supporting the reserve credit remain on JNL's balance sheet (but are held for the benefit of Brooke Re, such that the investment return on the assets will go to Brooke Re).[19] Often, funds withheld transactions are motivated by limiting credit exposure to the reinsurer: if the reinsurer fails to pay, the primary insurer still has the assets supporting the reserve credit on its own books.

JNL's choice to do first a small funds withheld transaction, followed by a much larger coinsurance transaction (where assets move over to the reinsurer) is unusual relative to Jackson's own practices and market practice (see Appendix A for details). The decision to send over assets rather than continuing with a funds withheld structure is especially mysterious because, per the 4Q 2025 conference call, the GAAP equity of Brooke Re (management's preferred measure of equity) was below its initial $1.9B on an operating basis, as discussed shortly. Why, then, would JNL choose to expose $1.3B of assets to Brooke Re's credit?

One interpretation would be that the fixed annuity coinsurance structure offers a liquidity bridge to Brooke Re: it adds $1.3B of hard assets to Brooke Re, to help close the significant and growing gap between the receivable from Brooke Re and the hard assets available to pay the receivable. Since the $1.3B of hard assets come with $1.3B of liabilities, this injection does not add equity and does not improve Brooke Re's fundamental ability to service its receivable.[20] In the short term, however, these assets may alleviate some liquidity stress because of the long-term nature of a significant portion of the liabilities, at the cost of a future solvency problem. Further, management has repeatedly called Brooke Re "self-sustaining," and a direct capital injection would clearly contradict this assertion. Viewed in this light, the FA reinsurance transaction could be seen as a "stealth recapitalization" of Brooke Re which injects hard assets and avoids an outright equity infusion.

## Solvency of Brooke Re

Given the large gap between estimated hard assets and the ballooning receivable due to JNL, we now turn to the natural next question: is Brooke Re adequately capitalized?

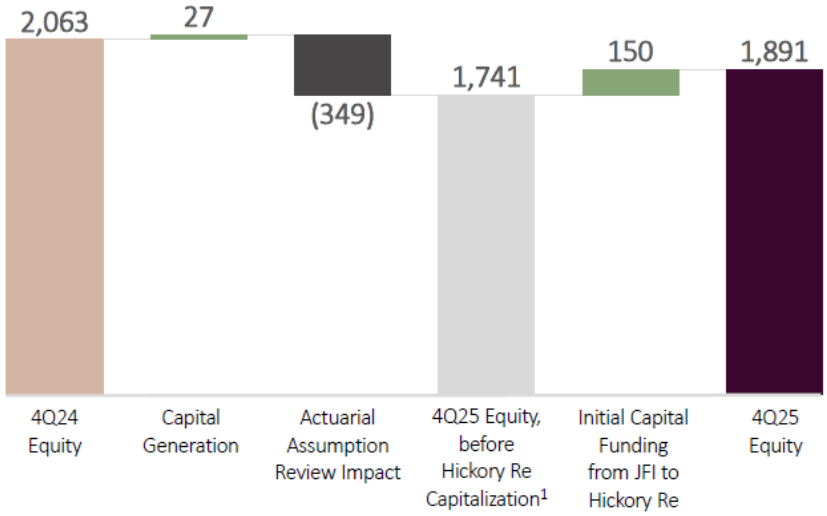
[18] See 2025 statutory financials Schedule S, Part 3, Section 1, Counterparty "Brooke Life Reinsurance Company", type of business ceded = "FA" (fixed annuity) for the reserve and premium figures.
[19] See column 15 of Schedule S, Part 3, Section 1 of the 2025 statutory statement, which shows funds withheld of $131,146,268 for one block and $11,212,273 for the other block.
[20] In Figure 5(a), if we made the economically nonsensical, maximally generous assumption that the $1.3B of injected hard assets were unencumbered by liabilities, the gap between receivables and hard assets would still be $3.6B, more than half the estimated receivable.

Brooke Re Has Lost Money Inception to Date

As noted above, Brooke Re began with $1.9B in total capital: $700MM of hard assets, and a $1.2B estimated value of the guarantee and hedge contract (the market risk benefit or MRB).[21]

Jackson has disclosed little quantitative information about Brooke Re's capital, and no Brooke Re financial statements are publicly available. Figure 6 below, from the 4Q 2025 earnings presentation, is the most complete disclosure of Brooke Re's equity over time. From 1/1/24 (starting equity of $1.870B) to 4Q 2024, Brooke Re generated 193MM of earnings and ended with $2.063B of equity. During 2025, Brooke generated only 27MM of earnings and lost another 349MM due to changes in actuarial assumptions, for net 2025 capital generation of -$322MM.

**Figure 6: Evolution of Brooke Re GAAP Equity**




Source: JXN 2025 4Q earnings presentation

The 1Q 2026 conference call also noted that Brooke Re lost "$100MM or so" in the quarter, and the 2Q 2026 conference call said that Brooke Re hedge results were "essentially flat." Thus, we estimate organic equity at Brooke Re to be ~$1,641MM at 2Q 2026. Inception to date, we estimate that Brooke Re's VA business has lost about $230MM, which is not encouraging given its importance as a counterparty to JNL. On an accounting basis, Brooke Re's total equity is greater due to the ~$650MM of equity in its subsidiary Hickory Re, which was formed in December 2025 to reinsure fixed annuities; including Hickory Re would give total equity of ~$2.3B. We emphasize, however, that the capital at Hickory Re is earmarked for reinsurance of fixed annuities, so it is debatable whether it should be counted as equity available to support the VA obligations.

We Estimate That Brooke Re Marked Up Its MRB by ~$5B through 2Q 2026

We now want to estimate the composition of Brooke Re's balance sheet after these losses, i.e. the assets and liabilities that lead to the organic equity of $1,641MM. There are four main drivers of Brooke Re's balance sheet: hard assets, the line 16.3 payable to Jackson, the line 9.3 receivable from Jackson, and the MRB asset. There may also be other smaller items, and differences due to modified GAAP, but

[21] Note that Jackson also has an MRB on its balance sheet which has a small contribution from non-VA products, and which is marked differently; we will try to be clear when we are referring to the Brooke Re MRB.

given the limited disclosures available, we believe that focusing on these four items is reasonable. Also, for purposes of this analysis, we do not show the payout annuity hard assets, since these were essentially offset at inception with an equal amount of reserves – i.e. the payout annuity block should not meaningfully change equity, as discussed above.

Figure 7 shows this simplified balance sheet of Brooke Re, both at inception and 2Q 2026. At inception, Brooke Re had hard assets of $699MM and a stated MRB of $1,171MM. At 2Q 2026, we can back out the MRB based on the estimated equity of $1,641MM, the 16.3/9.3 entries, and the estimated hard assets. We find an MRB value of $6.529B, an increase of $5.358B since inception. As a cross-check, we estimated the change in value in Jackson's MRB over the same period and found a $4.242B markup.[22] These calculations are necessarily estimates given Jackson's lack of disclosure on Brooke Re, but the basic point is clear: the hedge losses that Brooke Re has absorbed are significantly larger than the insurance fees received from JNL, and Brooke Re has written up its MRB as an offsetting gain.

**Figure 7: Estimated MRB Markup at Brooke Re**

| | At Inception | 2Q 2026 | Notes |
|---|---|---|---|
| Hard assets, estimated | 699 | 1,918 | (A) estimated in Figure 5(a) |
| Line 16.3 payable to JNL | 0 | -6,539 | (B) (from statutory filings) |
| Line 9.3 receivable from JNL | 0 | -267 | (C) (from statutory filings) |
| MRB asset | 1,171 | 6,529 | (D) = E - (A + B + C) |
| Equity | 1,870 | 1,641 | (E) Estimated / 4Q presentation |
| **MRB value change** | | **5,358** | |
| Note: JXN MRB value change | | 4,242 | |

Jackson's Disclosures Cast Doubt on the Accuracy of their Valuation Model

The MRB is an exceptionally challenging asset (or liability) to value. Not only is the MRB a complex, path dependent derivative, but, more importantly, its value is highly sensitive to policyholder behavior, and policyholder behavior is simply hard to predict.

Indeed, in the annual financial statements of life insurers with MRB assets (e.g. JXN, MET, LNC), auditors commonly identify the MRB as a "critical audit matter" in their audit opinion itself – Jackson's auditor, for instance, notes the "*high degree of auditor effort and subjective auditor judgment involved in evaluating the nonperformance risk, mortality, benefit utilization, and lapse assumptions used to estimate the fair value of MRB assets and liabilities*." To be clear, one should not imply anything nefarious about this industry-wide language – it simply underscores that the MRB valuation is a very assumption- and judgment-driven process which cannot be independently verified from observable trading prices.

The MRB is a long-dated series of cashflows which are initially positive but may ultimately become negative: the MRB holder (Brooke Re) receives guarantee fees from policyholders which are ~1.5% of the benefit base, but later, if the market falls and the account value is exhausted, the lifetime guarantees may require the insurer to pay these benefits directly. This guarantee risk is amplified by the existence of policy ratchets which prevent the benefit base from dropping due to market movements.

[22] Brooke Re marks its MRB differently than Jackson – it does not take into account changes in volatility or in Jackson's nonperformance risk (NPR). At 4Q 2023, when Brooke Re was established, Jackson's MRB excluding the effect of NPR was $1.028B; at 2Q 2026, the MRB ex-NPR was $4.676B, for a change of $3.648B. We then adjust for a cumulative effect of volatility of $594MM to get to $4.242B.

The essential valuation problem is that the MRB holder is short options to policyholders, and it is unclear how policyholders will behave in different environments. If the market drops, and policyholders find themselves with a withdrawal for life guarantee that is in the money (i.e. their account value is well below the benefit base), they will be more likely to draw on the guarantee, and less likely to let the policy lapse. If the market gains, and the guarantee is out of the money, policyholders are more likely to surrender the policy or switch to another product.

Additionally, a large portion of Jackson's VA book was written during the ultra-low interest rate period of 2010-2020, at which point a guarantee of a 5% withdrawal rate for life looked attractive compared to a 2% long-term Treasury rate. With long-term Treasury rates now above 5%, the VA value proposition may look less attractive (particularly considering the ~3.5% annual fee burden), and profitable customers may choose to lapse their policies. The valuation model for the MRB must incorporate these, and other behavioral factors, accurately.

Jackson's valuation model has struggled to capture policyholder behavior, as Jackson's own disclosure shows. JXN's quarterly financial supplements provide a breakdown of the quarterly change in the MRB, including, (1) the effect of expected (modeled) policyholder behavior, (2) the effect of policyholder behavior that is different from the expected behavior, and (3) the effect of the change in assumptions in the annual actuarial review (presumably informed by actual policyholder behavior trends).[23] Figure 8 below reproduces this data (negative numbers mean that the value of the MRB goes down).

**Figure 8: Quarterly Effect of Policyholder Behavior and Assumptions on MRB Value ($MM)**

| | Effect of expected policyholder behavior | Effect of policyholder behavior different from expected | Effect of changes in assumptions (annual actuarial review) |
|---|---|---|---|
| 4Q22 | -9 | -113 | -465 |
| 1Q23 | -89 | -167 | |
| 2Q23 | -120 | -121 | |
| 3Q23 | -197 | -72 | |
| 4Q23 | -206 | -123 | -346 |
| 1Q24 | -164 | -166 | |
| 2Q24 | -219 | -165 | |
| 3Q24 | -227 | -183 | |
| 4Q24 | -210 | -159 | -425 |
| 1Q25 | -186 | -124 | |
| 2Q25 | -168 | -110 | |
| 3Q25 | -190 | -187 | |
| 4Q25 | -214 | -151 | -366 |
| 1Q26 | -215 | -110 | |
| 2Q26 | -205 | -115 | |
| **Total** | **-2,619** | **-2,066** | **-1,602** |
| **Quarterly Average** | **-175** | **-138** | **-107** |

[23] Technical note: Jackson does not explicitly disclose the value of the MRB asset on Brooke Re's balance sheet. Here, we use the MRB as reported for Jackson as a whole. This MRB is essentially all due to variable annuities and so it is a reasonable proxy for understanding Brooke Re's MRB valuation.

First, consider the leftmost column - the effect of expected policyholder behavior. This effect is always negative (i.e. always decreases the value of the MRB) – policyholders tend to leave when their lifetime income guarantees are less valuable and stick around longer when their guarantees are more valuable. Over the 15-quarter period, the modeled policyholder behavior effect is -2,619 MM or -175MM/quarter.

Second, the middle column, "effect of policyholder behavior different from expected" shows the effect of errors in Jackson's policyholder behavior assumptions in each quarter – for example, if the model expected 100 profitable customers to lapse, and 150 profitable customers actually lapsed, the expected future profits of those extra 50 customers would disappear. Strikingly, the error is negative every single quarter, for 15 straight quarters, and large, totaling $2,066MM ($138MM/quarter) – almost as big as the expected modeled effect ($2,619MM). That is, Jackson has underestimated the negative effects of policyholder behavior for almost four years straight.

Third, this continued error is even more notable given that Jackson conducts annual actuarial reviews, which are supposed to incorporate updated behavior into their valuation. The effect of these model changes has also been uniformly negative, as shown in the third column. In fact, every year since being a public company, these actuarial reviews have caused Jackson to mark down the value of the MRB – by $16MM in 2021, $465MM in 2022, $346MM in 2023, $425MM in 2024, and $366MM in 2025.[24] These markdowns, while large in the aggregate ($1,602MM since 2022), are individually surprisingly small, in that they are of the same magnitude as the model error in a single year. In 2024, for instance, the actuarial review caused a $425MM markdown, but the realized effect of actual versus expected policyholder behavior (middle column in Figure 8) totaled $673MM. The MRB is a long duration asset, so it is mysterious why, with consistent model errors in a single direction, an actuarial review would lead to a revision of less than a year of error. We will have more to say about these persistent model inaccuracies in a few moments.

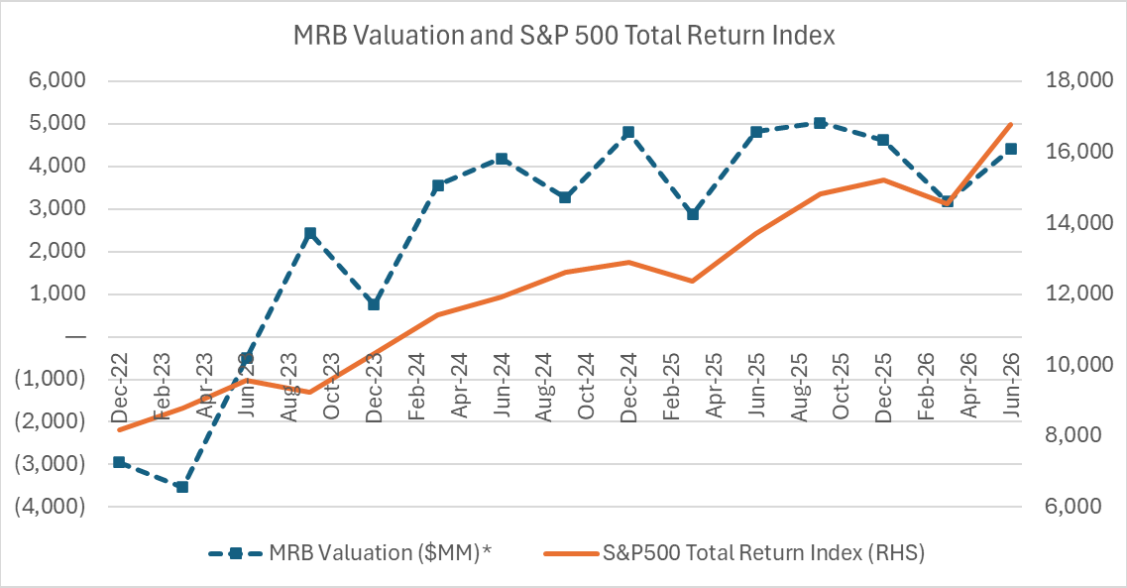
As a more fundamental issue, Jackson's marks presume that as the market goes up, the value of the MRB also goes up. Figure 9(a) illustrates this graphically, plotting the quarterly GAAP value of the MRB on Jackson's balance sheet against the S&P 500 total return.[25] This increased value is due in part to in-the-money guarantees becoming less in the money, but it is also due to a forecast of greater fees earned off of a larger benefit base.[26]

[24] Source: Jackson financial supplements. Note that the 2021 and 2022 figures are from the supplement under "LDTI recast documents."

[25] Technical note: because Brooke Re marks its MRB at a constant volatility and a fixed nonperformance spread, we fix a volatility (that of 4Q 2022) and adjust the reported MRB value before the cumulative effect of changes in nonperformance risk (i.e. changes in JNL's credit spread). For example, in 1Q 2023, the reported MRB before the cumulative effect of nonperformance was a liability of 2,784MM. This liability included a benefit of declining volatility of 747MM, so we report an adjusted liability of 3,531MM.

[26] From 1Q2024 - 2Q 2026, the cumulative MRB markup due to fund performance was $8.876B (source: JXN quarterly financial supplement).

**Figure 9(a): MRB Valuation Moves with S&P 500 Total Return Index**



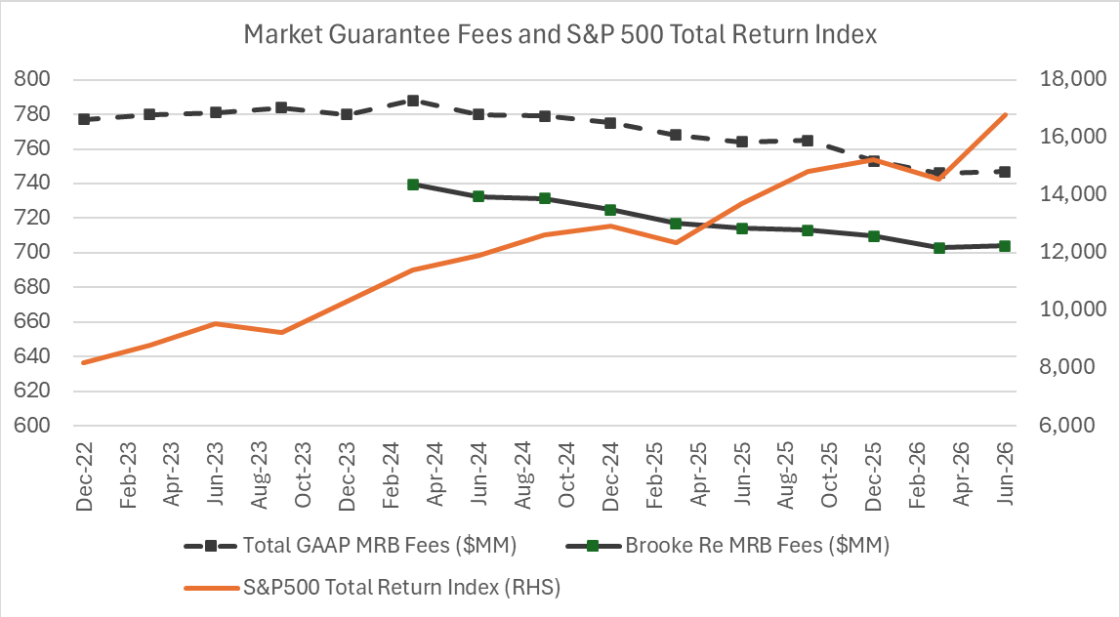

*MRB value adjusted for constant volatility and nonperformance risk. Negative value = liability.

Why does the MRB value go up with the market? Consider two cases: first, when account values are well below the benefit base, and second, when account values and the benefit base are close. In the first case, a rising market reduces Jackson's expected guarantee payments by closing the gap between the two. However, in the second case, the benefit base tends to move up with the account value in a rising market; this is largely the case applicable to Jackson since the inception of Brooke Re. Unlike the first case, there is no lasting improvement in the moneyness of the guarantee. Here, further growth in MRB value depends primarily on higher fees from a larger benefit base.

But as Figure 9(b) below shows, MRB fees have not risen since Brooke Re's inception – they have fallen. The figure shows both total guarantee fees reported on a GAAP basis for the MRB, as well as guarantee fees ceded to Brooke Re (statutory basis, line 8.1 of note 23 in the statutory financials). The guarantee fees ceded to Brooke Re are what matter for our analysis; we show the total market guarantee fees for context over a longer period.[27]

[27] It is our understanding that there is a technical accounting difference between the GAAP and statutory reported fees ceded to Brooke Re. We understand the Brooke Re fees to be the contractual rider fees that policyholders pay for the market risk benefits. The GAAP reported MRB fees are something different: for each contract at the time of inception, the GAAP MRB fee is the imputed fee that would cause the expected value of the MRB to be zero. Nonetheless, the two series are within ~10% of each other.

**Figure 9(b): MRB Guarantee Fees Do Not Move Up with the S&P 500 Total Return Index**




Both sets of guarantee fees have fallen, not risen. From inception to 2Q 2026, the guarantee fees ceded from JNL to Brooke Re have gone down by 5% since Brooke's inception - despite a 62% S&P total return; and over the same period, the benefit base has fallen 8% due to lapses and other withdrawals. This data suggests that Jackson has a policyholder behavior problem in its hedging: it is short the market (and long duration) to hedge the risk of market guarantees going in the money. But when the market rises, the asset that is being hedged is "called away" as policyholders exit the product. Again, this raises the issue of the sufficiency of Brooke Re's capitalization: it has suffered large cumulative hedge losses as the market has risen, against an asset that is not producing greater cashflow despite a 62% market rally – and has written up this asset.

What is Going on with the MRB marks?

Why are there persistent attribution losses (differences between actual and modeled policyholder behavior)? Jackson has not quantified the sources but has cited both lapse (policyholders surrendering the contracts completely) and withdrawal (policyholders drawing down on the benefit base up to the annual limit, typically set at 5%).

- 3Q 2024: the CFO stated that "*the unexpected component of the MRB roll forward is essentially related to lapse activity and withdrawals…when equity markets are really strong like we've seen this year, we do tend to see a higher level of lapse rates*."
- 4Q 2024: the actuarial review attributed the $425MM markdown to "*more refined projections of timing and frequency of withdrawal behavior on policies with guaranteed withdrawal benefits*." Notably, in the same quarter, the CFO explicitly stated that the company did not change its lapse assumptions: "*When we look back at setting our assumption for surrenders going forward, we look at that over time. That includes both periods of up markets and down markets. And so as we went through that, we didn't believe that it made sense to make any changes to our surrender assumptions at this point*."
- 4Q 2025: Management decided to change their lapse (surrender) assumptions – the $360MM markdown in the annual actuarial review was "*driven mainly by higher reserves from updated*

> *policyholder behavior assumptions, including lapses, partially offset by favorable mortality updates and some model refinements*." The chief actuary noted that, "Our analysis shows that the elevated lapse experience was particularly prevalent for variable annuity policies …at the money or slightly in the money."

Higher lapse rates in both fixed and variable annuities have been a well-observed industry phenomenon for some time, particularly as interest rates rose after the ultra-low pandemic period.[28] We understand from industry participants that insurers generally use dynamic surrender estimates that vary with the moneyness of guarantees (in-the-money guarantees lapse less, and out-of-the-money guarantees lapse more). However, they also inform us that the decision to include interest rates as a further, independent driver of lapses varies considerably - with some insurers fully integrating the effects of rates, and a small share ignoring the effect of rates entirely and using fixed, long-term lapse rate assumptions. We wonder whether Jackson is in this latter camp and assumes a lapse rate that is insensitive to rates; indeed, while Jackson has had consistent attribution losses during the higher rate environment in the last few years, it had attribution gains during the ultra-low rate environment of 2021.

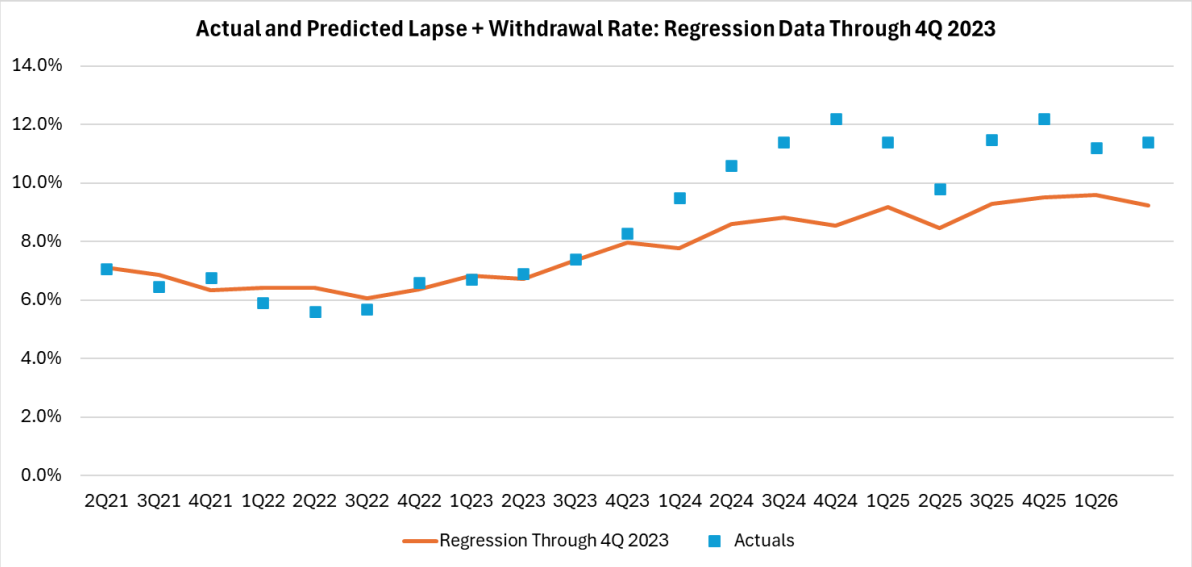
It is hard to understand analytically why Jackson has been so reluctant to increase its lapse rate assumptions – even a simple aggregate regression can show the importance of higher rates as a driver. To explain, each quarter, Jackson discloses their total VA attrition rate, which is the sum of mortality, lapses (surrenders), and withdrawals. We regressed the lapse + withdrawal rate (i.e. the attrition rate excluding mortality, which is very stable) on two factors: (i) the aggregate moneyness of the guarantees (the ratio of the account value to the benefit base – a lower ratio means that the guarantees are more in-the-money); (ii) the 20-year Treasury yield; both variables are lagged one quarter.

The question we ask is: when would one have been able to predict that higher rates lead to higher lapses? To answer this, we performed the regression over three windows: 2021-2023 (Figure 10(a)), 2021-2024, and 2021-2026 2Q (both Figure 10(b)).

Consider first Figure 10(a), where the regression only uses data through 4Q 2023. The fit (orange line) tracks the data well in-sample but fails to capture the continued increase in lapse rates during 2024 and 2025 – one could argue that there was insufficient data to be convinced of the effect of rates on lapses at the end of 2023. (This is a generous inference, since Jackson had policy-level data on hundreds of thousands of policies.)

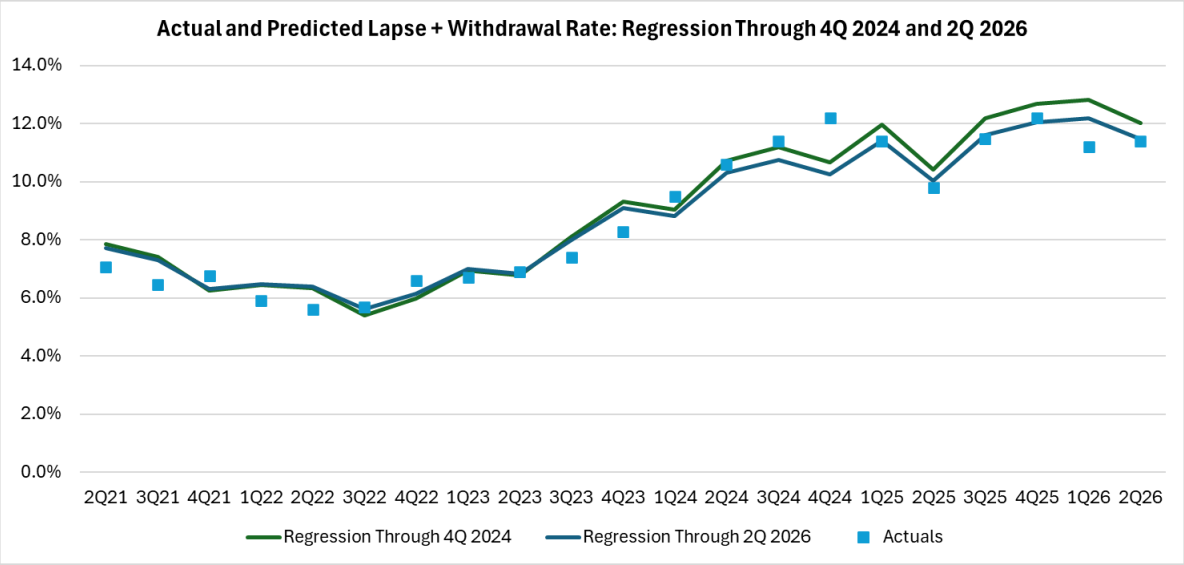
[28] See for instance this Oliver Wyman study which discusses fixed annuities.

**Figure 10(a): JXN Lapse + Withdrawal Rate: Actual and Predicted, Regression Through 4Q 2023**




Now consider Figure 10(b), where we repeat the regression, but using data through the end of 2024, as well as using all the data available (through 2Q 2026). Here the result is quite different. The regression through the end of 2024 picks up the actual lapse data well and is accurate in predicting the continued trend in 2025 and 2026. Furthermore, the regression result is essentially identical to the result from using all available data (and the coefficients are statistically indistinguishable), indicating that the result is stable. That is, the coarse, publicly-available data – data that is orders of magnitude less detailed than what is available to Jackson – were already consistent in 2024 with a significant rate effect on attrition. It is hard for us to understand what analysis Jackson performed to conclude that it did not "make sense to make any changes to our surrender assumptions" at the end of 2024.

**Figure 10(b): JXN Lapse + Withdrawal Rate: Actual and Predicted, Regressions Through 4Q 2024 and 2Q 2026**



Of course, we do not know why Jackson took so long to revise its lapse assumptions (and why the assumption revisions in general are modest compared to the size of realized losses). We observe, however, that once Brooke Re was established, Jackson had a strong incentive to prevent a markdown of Brooke Re's equity. Analysts have repeatedly asked about Brooke Re's capital strength, and management has repeatedly stated that Brooke Re was well capitalized. With only $1.9B of starting equity (and minimal organic profitability), the annual markdowns matter. As one analyst asked on the 4Q 2025 conference call, "*if we think about the annual actuarial review charges, if lapses do remain high on the VA side and you have another year of, we'll call it close to breakeven hedging on VA, the $300 million to $400 million that you've been having every year would be a decent percentage of this $1.7 billion*." A more robust markdown of even 1.5 years of attribution losses (which run $500MM - 600MM/year) would amount to nearly half the equity capital, calling into question the viability of the reinsurance structure and potentially impairing JNL's dividend capacity.

<u>We Estimate that Brooke Re is Overmarked on its MRB by ~$2B+</u>

We believe that Brooke Re is substantially overmarked and that a model that incorporates recent policyholder experience would lead to a markdown of most of Brooke Re's equity. We make this estimate in three different ways.

To clarify first what is meant by Brooke Re's equity, we consider both Brooke Re's estimated equity at 2Q 2026 without Hickory Re ($1,641MM, see Figures 6, 7) and with Hickory Re ($2,291MM). Again, while the equity in Hickory Re is part of Brooke Re's equity as an accounting matter, this capital is dedicated to support the growth of a separate Brooke Re subsidiary housing the fixed annuity business. We thus believe that the more economic view of Brooke Re's equity at year-end is the $1,641MM figure, and that this aligns with management's presentation: in the 4Q 2025 conference call, the CFO explicitly separated the Hickory Re contribution, noting that, "*During the quarter, there were no capital contributions to or distributions from Brooke Re, other than the initial capitalization of Hickory Re*."

The full valuation of the MRB depends on inputs that are not publicly available, like policyholder age distributions and contract terms. In addition, MRB valuation uses risk-neutral Monte Carlo simulation, similar to other derivatives, so the results are not easy to interpret intuitively. To ground the results, we can use a highly simplified model that takes into account what Jackson has said is happening – namely, that lapses (and possibly withdrawals) for profitable accounts are higher than expected. Jackson's quarterly MRB disclosure provides not only the total value of the MRB, but also, a breakdown of the total into an MRB asset and an MRB liability. For example, at year-end 2025, the reported MRB was a $4,265MM net asset, comprised of a $7,863MM asset (profitable contracts) and a $3,598MM liability (unprofitable contracts).

If lapses are faster than expected, we can estimate the effect by assuming that the asset part of the contract (the $7,863MM above) is burning off faster than expected. We can approximate the lapse rate error by looking at the effect of policyholder behavior different from the model and comparing it to the model result. For example, suppose that the model forecasts a lapse rate of 4%, which would cause a quarterly amortization of the MRB by $4. If there is, in addition, an "effect of policyholder behavior different from model" of $3, then to leading order, we can estimate that the lapse rate error is 3%, assuming that all of the deviation from model comes from the lapse rate.

Figure 11 shows the result of this calculation. We first imply an attrition rate as explained above, based on the realized dollar losses reported each period, compared to the modeled dollar losses. We also look at the average MRB value during 2024, 2025, and during 1H 2026. We use the average because the MRB mark fluctuates with the market. We estimate the change in the value of the MRB using the higher actual attrition rate reported by the company and a simple decaying annuity formula (at discount rate r, and attrition rate a, the annuity value goes as 1/(r+a)).

We find a range of MRB markdowns from $1,847MM to $2,650MM. While this method contains numerous assumptions and is quite rough, we do not find the result to be overly harsh: in 2025 alone, between realized policyholder behavior ($572MM) and assumption reviews ($366MM), Jackson took nearly $1B of write downs. If this estimate is approximately correct, then Brooke Re's equity, excluding Hickory Re, would drop to a range of -$206MM to -$1,009MM - i.e. slightly or strongly negative. Including Hickory Re gives a range of +$444MM to -$359MM.

**Figure 11: Simplified Estimate of MRB Valuation Markdown**

| | 2024 | 2025 | 1H 2026 | Notes |
|---|---|---|---|---|
| Effect of expected policyholder behavior ($MM) | 820 | 758 | 420 | (A) |
| Effect of policyholder behavior diff. from model ($MM) | 673 | 572 | 225 | (B) |
| Reported attrition rate | 12.3% | 12.6% | 12.8% | (C) |
| Implied model attrition rate | 6.8% | 7.2% | 8.3% | (D) = A/(A+B)*C |
| Average MRB asset value | 8,269 | 8,105 | 7,371 | (E) |
| Assumed discount rate | 5.0% | 5.0% | 5.0% | (F) |
| MRB asset value at actual attrition rate | 5,619 | 5,611 | 5,524 | (G) = (D+F)/(C+F)*E |
| **MRB markdown ($MM)** | **-2,650** | **-2,494** | **-1,847** | (H) = G – E |
| Brooke Re equity, ex-Hickory Re, estimated at 2Q 2026 | 1,641 | 1,641 | 1,641 | (I) |
| Pro forma Brooke Re equity, ex-Hickory Re | -1,009 | -853 | -206 | (J) = I + H |
| Pro forma Brooke Re equity, with Hickory Re | -359 | -203 | 444 | (K) = J + 650MM |

With this rough grounding in mind, we also performed a more thorough analysis using risk-neutral valuation. We again stress that we do not have the data to make such a valuation highly accurate; however, what we are trying to do is to look at differences in valuation as a result of changing assumptions, so we can hope to cancel overall model errors. We do this in two ways. First, we used a simplified representative portfolio of 20 policies and calculated the difference in value from higher lapse rates. Second, we did a more extensive, full simulation. Both of these methods are described in more detail in Appendix B. In the second simulation, we adjust the model inputs, particularly the lapse rate function, to try to reproduce Jackson's net MRB asset as reported. Interestingly, the model finds that a total attrition rate of 7.4% best fits the observed MRB marks – which is close to the numbers in Figure 11 (implied model attrition rate of 6.8-8.3%). In both cases, we then adjust lapse rates to match recent experience and record the difference in value.

We find that in the simplified representative portfolio, moving lapse rates to more realistic levels gives a markdown of 1.2-1.7% of the benefit base. Against a benefit base of $175B, this leads to markdowns of **$2.0B-$3.0B**, greater than the simple estimate. In the more complicated model, the lapse rate movement gives a markdown of **~$2.2B** (range $1.8B-$2.6B depending on how the change is implemented).

To be clear – we are not claiming that any of these estimates precisely reproduce what is in Jackson's model – they cannot. Nonetheless, we find them useful because they all result in similar markdowns, and because the magnitude of ~$2B is plausible. Indeed, since Brooke Re was formed, in just 10 quarters, Jackson's realized model errors ("policyholder behavior different from expected") summed to $1.47B (Figure 8). Since Brooke Re has only ~$1.6B of standalone equity, these estimates paint a troubling picture of Brooke Re's capital adequacy, one where Brooke Re would have very low or even negative equity if the model is appropriately revised for recent policyholder behavior.

## Jackson Is Stuck with Brooke Re

Jackson is in a difficult position with Brooke Re. The company has tried gently to shore up Brooke Re's liquidity (the fixed annuity transaction) and solvency (establishing Hickory Re as a subsidiary), while also maintaining the appearance that Brooke Re is self-sustaining. But as detailed above, the initial $700MM of hard assets is far too low to enable prompt settlement of hedging results, and the 12-quarter delayed settlement asset has led to a ballooning receivable that exceeds JNL's entire surplus. Existing hard assets cover less than half of this receivable, so the remainder of the "collateral" is the MRB asset – an entirely self-marked asset where Jackson's behavioral model has been wrong every quarter for nearly four years. While injecting additional unencumbered hard assets could help, the scale of hard asset injection needed to clear the receivable is simply too large relative to JNL's surplus.

One may therefore ask whether Jackson could attempt to fix the situation by unwinding the Brooke Re transaction, reintegrating Brooke Re back into JNL. Unfortunately, it cannot do so without severely impairing its statutory capital. If JNL were to unwind the Brooke Re transaction and reintegrate the entity, it would eliminate the receivable asset, and gain the hard assets of Brooke Re and the $650MM of equity in Hickory Re. Because Brooke Re would be part of JNL, which is governed by statutory accounting and does not have the permitted practice to follow modified GAAP accounting, the reintegrated entity would no longer be able to mark up the MRB.

Figure 12 shows the results of this reintegration, if it were done in 4Q 2025 (the previous high receivable), 1Q 2026, or 2Q 2026. The surplus impact is very large, ranging from -$2.191B in 1Q 2026 to -$4.238B in 2Q 2026. In 2Q 2026, the pro forma capital ratio would be 143%, a level not only far below Jackson's own targeted 425% ratio, but a level that would likely invite regulatory scrutiny. Such a reintegration would clearly be unpalatable and thus is not an easy way out from the Brooke Re structure. This calculation also emphasizes how forcefully JXN is leaning on its MRB mark, in spite of years of incorrect forecasts – the surplus of JNL, by our estimate, effectively rests on the MRB markup.

**Figure 12: Effect of Reintegrating Brooke Re into JNL**

| | 4Q 2025 | 1Q 2026 | 2Q 2026 | |
|---|---|---|---|---|
| Hard assets | 2,013 | 1,931 | 1,918 | (A) |
| Equity in Hickory Re | 150 | 650 | 650 | (B) |
| Net receivable | -5,775 | -4,772 | -6,806 | (C) |
| Difference = Change in JNL Surplus | -3,612 | -2,191 | -4,238 | (D) = (A) + (B) + (C) |
| JNL Surplus | 4,762 | 4,721 | 4,971 | |
| Pro forma surplus | 1,150 | 2,530 | 733 | |
| JNL Total Adjusted Capital (TAC) | 5,523 | 5,491 | 5,773 | |
| Pro forma TAC | 1,911 | 3,300 | 1,535 | |
| Pro forma capital ratio | 196% | 333% | 143% | |

## Conclusion

At the inception of Brooke Re, management forecast that the structure would lead to "*increased transparency and more intuitive results.*"[29] In 4Q 2025, then-CFO (now incoming CEO) Don Cummings asserted that "*we're seeing stable regulatory capital and distributable earnings at Jackson National Life. That's been clear in our strong free capital generation, free cash flow, and capital return over the past eight quarters*."[30] Our analysis of the statutory financials finds the opposite. The so-called "free capital generation" at JNL is enabled by a ballooning "receivable under reinsurance contracts" from Brooke Re, a receivable that by definition does not provide immediately distributable cashflow. And the capital backing that receivable at Brooke Re, far from being "transparent" or "intuitive", is the MRB asset, whose value is not only opaque and assumption-driven, but also, one where Jackson has been consistently overoptimistic according to its own disclosures.

Indeed, after seeing 10 quarters of operating results, it is unclear to us whether, in substance, the Brooke Re transaction meets NAIC guidelines for reinsurance credit at all.

The Statement of Statutory Accounting Principles for life insurance (SSAP 61R) lists features that disqualify transactions from reinsurance accounting. In SSAP 61R, the NAIC notes that, "*Reinsurance agreements must transfer risk from the ceding entity to the reinsurer…any contractual feature that* ***delays timely reimbursement*** *[from the reinsurer to the cedant] violates the conditions of reinsurance accounting*" [emphasis added]. More specifically, Appendix A-791 (which SSAP 61R expressly incorporates) disqualifies arrangements where "*settlements are made less frequently than quarterly or payments due from the reinsurer* ***are not made in cash within ninety*** *(90)* ***days of the settlement date***" [emphasis added].[31]

The Brooke Re 12-quarter mechanism functionally "delays timely reimbursement" of the hedging risks that Brooke Re reinsures. Perhaps by defining 12 separate "settlement dates", one for each quarterly installment, Jackson management can make a hyper-technical argument that each payment is made in a timely way. This argument proves too much. It would equally apply to a 120-quarter settlement cycle; imagine defending the position that each payment made over 30 years is "timely." More concretely, consider the actual 10 quarters of experience with Brooke Re. Over the last 2.5 years, Jackson, by our estimation, would have been paid over $6B by Brooke Re had payments been timely; instead, it has paid to Brooke Re ~$700MM.[32] More than 100% of the economics of the reinsurance are yet unpaid and wrapped up in a ~$6.8B net receivable. This is strong evidence that the structure delays timely reimbursement. Or said less formally: if you have to loan your hedge counterparty more than what it owes you, are you really hedged?

There is another benefit to calling the line 16.3 amount owed from Brooke Re a "reinsurance receivable": it carries a very low (possibly zero[33]) risk-based capital (RBC) charge. Jackson has not disclosed

[29] 1Q 2024 conference call
[30] 4Q 2025 conference call
[31] See A-791 Section 4A, clause (8), incorporated by reference in SSAP 61R.
[32] The sum of all line 9.3 payables including the 2Q 2026 receivable is -$717MM.
[33] LR016 applies a 0.78% factor to various items listed in Schedule S in the statutory financials, such as the recoverable for paid losses and reserve credits. The Schedule S items attributable to Brooke Re are directly visible (see Schedule S, Part 2 and Part 3, Section 1 of the 2024 and 2025 statutory financials). There are no amounts corresponding to the line 16.3 receivable in this schedule. Thus, we believe that JNL is likely holding zero capital against the line 16.3 receivable.

whether any capital is held against the line 16.3 receivable, but the amount, if any, is likely to be small. The NAIC RBC section on reinsurance (section LR016) states that reinsurance risk "is deemed comparable to that represented by bonds between risk classes 1 and 2 [i.e. investment grade] and is assigned a pre-tax factor of 0.78%," meaning that 78 cents of capital is needed for each $100 of exposure. But does this really make sense in this case? What is the line 16.3 receivable? Each hedge payment both carries interest and amortizes over a fixed schedule of 11 quarters. This is not a "receivable." It is a loan. A loan carries a very different risk weighting, depending on its rating. Brooke Re is not a rated entity, and, in our view, has questionable creditworthiness – it has lost money inception to date even assuming that Jackson's MRB marks are accurate. As an illustrative calculation, suppose that the loan carried an NAIC 4 (~single B) rating: we then estimate required capital of ~$1B against the $6.5B line 16.3 "receivable".[34] This required capital is roughly as large as the entire risk-based capital of the rest of Jackson's book (~$974MM at end-2025), and if applied, would reduce JNL's capital ratio to ~273%, below the 425% internal target for dividends. This NAIC math makes sense: the Brooke Re loan is over 30 times larger than the largest single-issuer credit exposure (~$200MM).[35] This calculation is only illustrative, but the basic point stands: JNL likely receives a large capital benefit from calling the loan to Brooke Re a "receivable," and that this single loan more appropriately may attract a capital charge on the order of Jackson's entire book.

If the Brooke Re receivable were small, or mostly settled in cash each quarter, Jackson would have an earnings quality issue, but perhaps a manageable one. The problem the company faces now is far more serious than a question of earnings quality – it is a question of balance sheet stability at JNL, a question highly relevant to policyholders.

Starting in 1Q 2024 and continuing through 4Q 2025, in both its statutory and GAAP financials, JNL asserted that the Brooke Re arrangement "***serves the interests of policyholders*** *by protecting statutory capital through diminished non-economic hedging and related costs*" [emphasis added]. We disagree. Brooke Re has enabled accelerated capital return to shareholders at the expense of the quality of the surplus of JNL. Dividends to the parent, and ultimately to shareholders, have resulted in a surplus backed wholly by Brooke Re's promises to pay and represent a value transfer from policyholders of JNL to the shareholders of JXN.

We find it notable that this language about "serving the interests of policyholders" was eliminated in the 1Q 2026 GAAP and statutory filings and remains absent in the 2Q 2026 filings.[36]

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[34] The NAIC 4.B weight is 9.535%. We apply the concentration charge of 200% for top-10 positions, and tax-effect the results according to the NAIC manual. The net result is a weighting of 16.0% against a $6.539B receivable, or $1.044B of risk weighting. Because the assigned capital is so large, we do not model the correlation effect and assume the capital is additive. (As a point of clarification: in most of the analysis we have looked at the net (line 16.3 – line 9.3) receivable, which is $6.8B at 2Q 2026; here we consider only the line 16.3 $6.539B receivable because it is the long-dated, interest bearing component.)

[35] By rolling forward the 4Q 2025 statutory data to 2Q 2026, we see $185MM of credit exposure to the Vanguard Group (the asset manager) followed by a $174MM commercial mortgage loan in Hoboken as the two largest exposures.

[36] 2025 10-K: "*The [Brooke Re] transaction and related modified U.S. GAAP approach enable us to largely moderate the impact of the cash surrender value floor on Jackson's total adjusted capital, statutory required capital, and RBC ratio and enable more efficient economic hedging of the underlying risks of Jackson's business. This outcome serves the interests of policyholders by protecting statutory capital through diminished non-economic*

The Michigan regulator has primary responsibility for protecting policyholders and approved the Brooke Re transaction. Brooke Re is an authorized Michigan reinsurer, so its receivables are admitted assets for statutory purposes. However, statutory accounting does not grant unbounded leeway to reinsurance receivables simply because the reinsurer is authorized: receivables must be considered for impairment – an analysis closely related to how much risk-based capital JNL should be holding against the Brooke Re receivable. The Statement of Statutory Accounting Principles for life insurance (SSAP 61R) notes (para. 42) in respect of reinsurance receivables: "*the ceding and assuming companies must determine if reinsurance recoverables are collectible. If it is probable that reinsurance recoverables on paid or unpaid claim or benefit payments will be uncollectible…these amounts shall be written off through a charge to the Statement of Operations*." Considering this requirement, we wonder whether the regulator can allow the current state of affairs to continue indefinitely: if a receivable that is 137% of surplus and that is supported primarily by a modeled MRB asset of debatable quality is not too large, what about one that is 150%? 200%? And, as this receivable grows, could the regulator challenge the near-zero risk weighting that JNL appears to be giving the asset for RBC purposes?

Even if the Michigan regulator continues to permit this exceptionally large receivable with a near-zero risk weighting, there is another set of interested parties who may move to protect themselves—institutional holders of JNL's short-term debt. JNL has an active and growing guaranteed investment contract (GIC)/funding agreements (FA) business. The 2025 10-K explains that "*the Company's GIC products are marketed to defined contribution pension and profit-sharing retirement plans. Funding agreements are marketed to institutional investors, including corporate cash accounts and securities lending funds, as well as money market funds.*" GICs/FAs are short-term debt that may be issued by an SPV (where the SPV holds a contract issued by the insurance company), so that they have the same credit as JNL policyholders. At year-end 2024, Jackson had issued $8.4B of FAs/GICs (including FHLB funding agreements), growing to $11.0B at year-end 2025 and 2Q 2026. The 2025 and 2Q 2026 amounts include commercial paper: in 2Q 2025, JNL created a $3B FABCP program, of which $626MM was drawn at year-end 2025, and $1.1B was outstanding at 2Q 2026. Unlike VA policyholders whose account balances (but not guarantees) are protected by separate accounts, institutional money market and corporate cash accounts have credit risk to JNL's general account and must decide whether to roll commercial paper or funding agreements each time they mature. These types of institutional funds are highly risk-averse by mandate. More broadly, the credit markets may find the risk-reward of Jackson's debt significantly less attractive once aware that the entire surplus of JNL depends on a promise to pay from an opaque affiliate.

Jackson created Brooke Re to engineer around the statutory prohibition on negative reserves – a structure for which we have found no peer precedent. With the benefit of hindsight after a 60+% equity market rally since formation, we believe that Brooke Re was simply not adequately capitalized: an entity starting with just $700MM cannot reasonably carry hedges that swing $200MM per 1% move in equity

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*hedging and related costs. Overall, this transaction allows us to optimize our hedging, stabilize capital generation, and produce more predictable financial results going forward*."
2026 1Q 10-Q: *"The transaction and related modified U.S. GAAP approach enable us to largely moderate the impact of the cash surrender value floor on Jackson's total adjusted capital, statutory required capital, and RBC ratio and enable more efficient economic hedging of the underlying risks of Jackson's business. Overall, this transaction allows us to optimize our hedging, stabilize capital generation, and produce more predictable financial results going forward."*

markets, or $30MM per basis point move in Treasury yields. While these hedge movements are, on paper, offset by changes in the MRB value, these changes are the output of a model that has been persistently optimistic about policyholder behavior in a rising equity and rate environment. And Jackson's three-year deferral mechanism has introduced a new problem – now that Jackson has allowed this receivable to build up quarter after quarter, it is no longer in a position where it can unwind the structure without severely impairing JNL's capital.

We therefore believe that the capital JNL has represented to the market as "free capital" that can be returned to shareholders, in fact, should be retained to fund the costs associated with its hedging of VA guarantee liabilities. This "free capital" exists because JNL is, in effect, offsetting the large losses in its hedging program with a reinsurance receivable with a low, possibly zero, risk weighting for RBC purposes – even though Brooke Re's credit quality appears doubtful and highly dependent on Jackson's MRB assumptions. While Jackson has told investors it intends to pay $900MM - $1.1B of capital back to shareholders this year, it would not surprise us to see JNL sharply changing direction to retain capital, support Brooke Re or even raise capital.

# Appendix A: Jackson's Unusual Choice to do Coinsurance after Funds Withheld

In a coinsurance transaction, assets move from the cedant to the reinsurer in order to compensate the reinsurer for the ceded liabilities; in a funds withheld transaction, these assets, while economically belonging to the reinsurer, stay on the balance sheet of the cedant, providing credit protection to the cedant. JNL's 2024 reinsurance contract with Brooke Re for the VA guarantees was done on a funds withheld basis (reserve credit $133MM at year-end 2024). However, the December 2025 reinsurance contract with Brooke Re for organic payout annuities, where the reserve credit of $1.3B was ~10x as large, was done on a coinsurance basis.

This choice to do a coinsurance transaction following a funds withheld transaction is unusual. We have analyzed Schedule S filings for over 50 life insurers, looking for cases where insurers reinsure with affiliates. We found that nearly 90% of the aggregate reserve credit taken corresponds to funds withheld (COFW) structures. This makes sense, since insurers are generally stronger credits than their captives. Jackson followed this market norm in the first Brooke Re variable annuity reinsurance but did not in the much larger fixed payout annuity transaction. We also find it notable that for every other reinsurance relationship disclosed on JNL's Schedule S, Part 3, Section 1, JNL does not mix coinsurance and funds withheld transactions. For example, the reinsurance relationship with Hannover Life Re has only coinsurance without funds withheld (code "CO"), while the relationship with Athene Life Re has only funds withheld (code "COFW"), and no coinsurance. We cannot find another example where Jackson has decided to do both CO and COFW transactions with a given reinsurer.

# Appendix B: Brief Description of Risk Neutral Valuations

Our first method to estimate quantitatively the impact of static surrender rates is to use what we believe to be more realistic, interest rate-sensitive estimates of surrender rates, and compare the results to a stylized estimate of the Jackson assumptions that has no interest rate sensitivity. This is a risk-neutral valuation, similar to the method used by Jackson and others in the industry to value MRBs. To do this we composed a simplified portfolio of GLWB policies representative of the Jackson portfolio with respect to average age, average withdrawal rate, guarantee moneyness and typical wait times for non-withdrawing policies to begin withdrawals. We then simulated these policies using a set of economic scenarios, similar to what is used in the MRB calculation, to determine the impact on the present value of cash flows of our alternate dynamic surrender formulae (Jackson Assumed vs. Model).

Sample dynamic surrender rate assumptions behind the analysis are shown below for transparency – depicting an assumed interest rate, a set of assumptions for Jackson National which do not vary with rates, and realistic estimates of surrender rates across three different interest rate environments (lower interest rates, current interest rates, higher interest rates) consistent with industry dynamic surrender formulae that consider interest rates as a proxy for the ease with which a policyholder could replace their current policy with a policy providing superior benefit levels. The column "ITM (AV/BB)" measures how in-the-money a policy is, proxied by the ratio of the account value to the benefit base: a lower value means that the guarantee is more valuable, and correspondingly lapse rates are lower. With this lapse rate assumption, we sensitize the model inputs across a range of scenarios (lower rates, delayed or higher withdrawals, initial moneyness) and arrive at a range of 1.2-1.7% of the benefit base notional as

the decline in value in moving between the assumed static Jackson lapse rate model and the model implemented here.

**Example Lapse Rates versus Moneyness and Interest Rates***

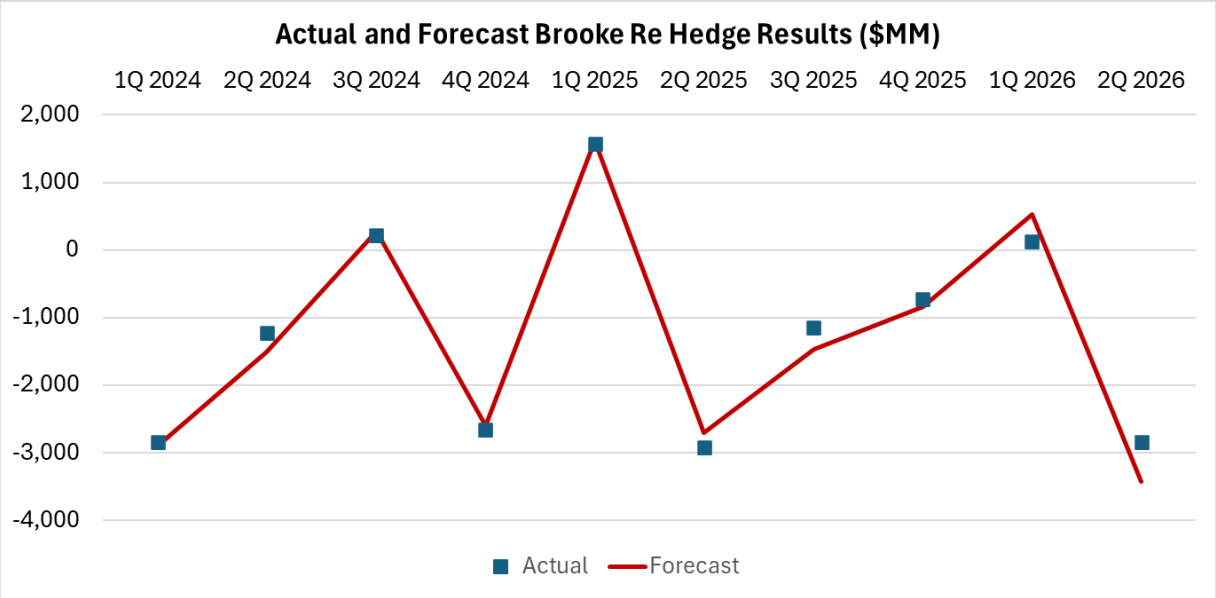
| ITM (AV / BB) | Assumed Jackson | Model: Low Rates | Model: Current Rates | Model: Higher Rates |
|---|---|---|---|---|
| 0.00 | 0.0% | 0.0% | 0.0% | 0.0% |
| 0.15 | 0.1% | 0.1% | 0.1% | 0.1% |
| 0.40 | 3.0% | 1.0% | 1.0% | 1.0% |
| 0.50 | 3.0% | 2.0% | 2.0% | 3.0% |
| 0.60 | 3.0% | 3.0% | 6.0% | 6.0% |
| 0.70 | 4.0% | 4.0% | 7.0% | 9.0% |
| 0.75 | 4.0% | 5.0% | 7.0% | 10.0% |
| 0.80 | 4.0% | 5.0% | 8.0% | 11.0% |
| 0.90 | 5.0% | 6.0% | 8.0% | 12.0% |
| 1.00 | 7.0% | 7.0% | 9.0% | 13.0% |
| 1.30 | 8.0% | 8.0% | 10.0% | 15.0% |

*These correspond to the assumptions at the low end of the $2.0B-$3.0B estimated overvaluation

The Monte Carlo model also is a risk neutral valuation of the MRB. The population is segmented into over 1,000 different cells (origination year, age, moneyness, withdrawal behavior); the origination year distribution at the present time is derived from disclosed or estimated data on annual past originations. Contract fees (rider fees, fund expense, mortality and administration) are estimated based on contracts, prospectuses and financial disclosures. For instance, a 1.65% rider fee is obtained from the statutory financials. The final distributions are chosen to match disclosed figures (e.g. average age of 70 in the Jackson book, or average account value / benefit base). The model then tries to fit the disclosed value of the MRB for a 5-quarter period (4Q 2024 - 4Q 2025), principally by varying policyholder behavioral response (e.g., lapse rate as a function of moneyness). As mentioned in the main text, the overall model attrition rate is ~7.4%. Increasing this attrition rate by increasing the lapse rate (in various ways - e.g. across all cohorts, across more in the money cohorts, etc.), as well as adjusting the withdrawal rate, then gives a change in the value of the MRB, which is in the range of $1.8B-$2.6B.

# Appendix C: Hedge Loss Regression

We regress the Brooke Re hedge results on the quarterly S&P 500 total return and the quarterly change in the 20-year bond yield.[37] A 1% equity gain corresponds to a hedge loss of ~$200MM (i.e. a short delta of $20B), while each basis point increase in yields corresponds to a hedge loss of ~$30MM (i.e. DV01 ~ $30MM). The regression fit is shown below.

[37] Notes on the regression: the dependent variable is the hedge result, normalized to the average size of JNL's VA portfolio: for example, a $2B loss on a $200B portfolio would be a 1% loss. We use the window 1Q 2024 - 4Q 2025 and have checked that the results do not change meaningfully if we use a shorter window such as 1Q 2024 - 1Q 2025.

**Actual and Forecast Brooke Re Hedge Results ($MM)**