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PRIVATE MARKETS

ALTERNATIVE CREDIT

Deconstructing asset-based finance

A closer look at risk and structure

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Key takeaways

- Asset-based finance (ABF) encompasses a large and diverse set of credit investments that differ fundamentally across collateral types, duration and, most importantly, in the nature of the downside protection they provide.
- A key distinction in ABF is between diversified pool strategies and single-asset deals, which differ substantially in the nature and source of downside protection.
- Manager selection in ABF turns on three questions: how assets are sourced and whether the incentive structure aligns with investor interests; whether specialist underwriting expertise is present across each sub-strategy; and whether the manager has the expertise and experience to translate deal access into portfolios that target specific investor objectives.
- The application of ABF structures to renewable energy, digital infrastructure and grid modernization is expanding the opportunity set for long-duration investors.

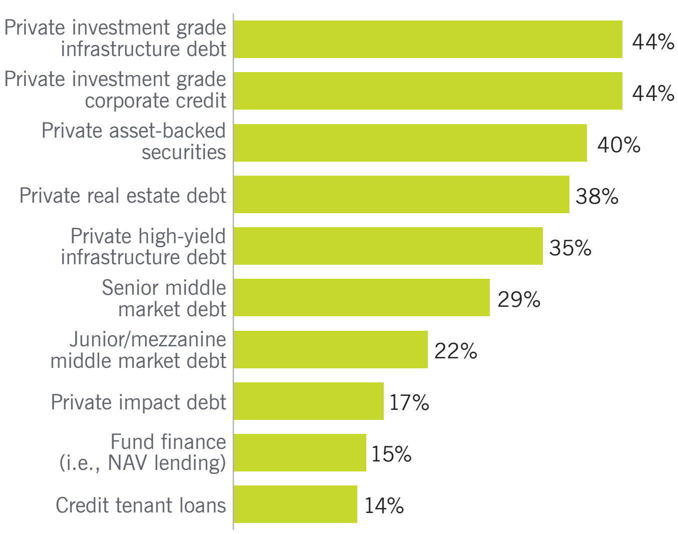
Discover how the TIAA General Account takes a hybrid approach to ABF investing.

Institutional investors are increasingly allocating to asset-based finance, drawn by the secular retreat of banks from complex lending and the corresponding expansion of private markets as the primary source of credit intermediation. The structural case for the asset class is well established: collateral-backed credit with contracted cash flows offers diversification from corporate risk, spread premiums over public fixed income and structural protections that public markets rarely provide.

According to Nuveen's 2026 EQuilibrium Survey, 46% of institutional investors cite diversifying their alternative credit portfolio as a top priority over the next five years. For those planning to increase their allocation to private fixed income, 40% or more intend to direct capital specifically to private investment grade infrastructure debt and asset-backed securities. That intentionality suggests investors are moving past the question of whether to allocate to ABF and wrestling with a more demanding one: how to allocate within it.

The category now encompasses strategies that differ fundamentally in collateral type, duration, origination model and, most importantly, in the nature of the structural protections and security they actually provide.

Figure 1: Top investment choices for institutions planning to increase private fixed income



Source: 2026 Nuveen EQuilibrium survey

This paper deconstructs the structural dimensions that distinguish ABF strategies from one another, and what those differences mean for manager selection and portfolio construction.

The breadth behind the ABF label

Beneath the ABF label lies a growing set of strategies that share a name but differ fundamentally in collateral type, structure and risk profile.

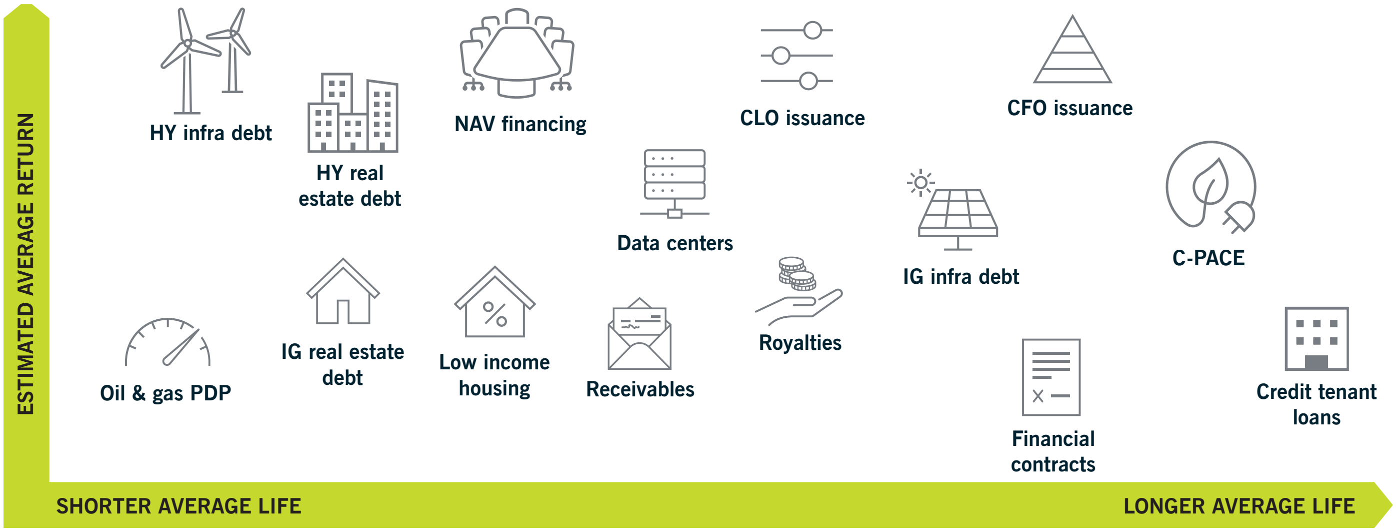
At its most basic, ABF covers any credit investment whose return is secured by discrete assets or cash flows, as distinct from corporate direct lending, which is ultimately backed by the enterprise value and operating cash flow of a business. The rapid expansion of private ABF as an institutional allocation has been predominantly a U.S. story, driven by the depth of U.S. consumer and commercial loan markets and the breadth of statutory and contractual frameworks that support asset-level collateralization. However, that is beginning to change, as similar structures gain traction in other jurisdictions.

The universe of investment opportunities ABF has produced is vast. Consumer loan pools, trade receivables, equipment leases, credit tenant loans, project finance, infrastructure debt, Commercial Property Assessed Clean Energy (C-PACE), music royalties and data center receivables can all qualify, but they do not share a common risk profile.

A useful starting point is to divide the asset class into two broad segments: macro-sensitive ABF, where consumer credit and leasing strategies are meaningfully tied to the economic cycle, and real asset-based and infrastructure-oriented ABF, anchored in contracted cash flows, statutory liens or long-term obligations, a distinction we explore in the next section.

The duration characteristics of these two worlds are also distinct. Pooled consumer and commercial loan strategies typically carry a weighted average life of two to 12 years; credit tenant loans extends that range to 15 to 25 years; and infrastructure debt can span seven to 30 years. For investors managing long-dated liabilities, this spectrum matters as much as collateral type. Within each duration band, the nature of the structural protections and security differs substantially, and that difference has significant implications for how portfolios behave under stress.

Figure 2: Return and duration vary considerably across the ABF universe



Source: Nuveen as of 31 December 2025. For illustrative purposes only.

Structural protections are important and varied

Understanding the structural protections and contracts in place is the most important consideration in any ABF investment. These can look very different between ABF investments consisting of diversified pools of collateral and single-asset deals.

When evaluating an ABF investment, understanding the credit risk embedded in the assets and corresponding cash flows is a necessary first step, but not sufficient to make a decision. Knowing how the investment is protected if things go wrong is paramount. Structural protections are common and critical in ABF investments to protect investors in the event of a downside scenario. These may include features such as cash sweeps and rapid amortization triggers in ABS deals backed by a pool of collateral. Additionally, financial maintenance covenants, distribution restrictions and even statutory protections can be common for infrastructure investments and other types of assets backed by single assets. Different types of structural protections and security features are not in competition: they can serve different portfolio objectives.

For example, some structured pools of ABF strategies rely on diversification across a large number of underlying obligors as a primary form of protection and the underwriting approach is unique to the collateral. Because the pool is generally too large to evaluate loan by loan — doing so would be prohibitively inefficient — the investor underwrites at the portfolio level based on criteria such as historical loss rates, loan-to-value distributions, geographic and credit score stratification and prepayment assumptions.

In most market environments, this approach to underwriting tends to be sound. The limitation is that this protection is backward-looking and probabilistic in nature. In a stress scenario, correlations across obligors that appeared modest in historical data can increase. This puts pressure on servicers, the third-party administrators responsible for collecting payments, managing delinquencies and enforcing loan terms on behalf of investors. At this point, the portfolio-level statistics that supported the original underwriting may evolve as the pool seasons or economic conditions shift.

The structural and contractual features embedded in the transactions — trustee arrangements, borrowing base tests, performance triggers and backup servicer provisions — are the actual factors designed to address these dynamics, and when properly constructed, they can be robust. Different tranches within a pooled structure may also carry meaningfully different protections and rights, adding another layer of differentiation.

For single-asset or small group transactions, there is greater transparency around the specific underlying investments, and the structural considerations, underwriting analysis and security features may be specific to those individual assets. C-PACE financing provides a clear example where the loan itself contains embedded security features through both law and contract. The senior tax lien that secures a C-PACE loan attaches to the property itself and is non-extinguishable. It survives foreclosure and takes priority over virtually all other claims on the asset. These features are a matter of property law and hold regardless of market conditions.

Similarly, many infrastructure debt investments are backed by contracts such as power purchase agreements, long-term leases, utility tariffs or contracted venue revenues. In these transactions there are typically also other forms of protection in place including financial covenants, restricted payment tests and reserves. However, in-depth analysis of the contracts is absolutely critical.

Knowing what you own

Each ABF sub-strategy demands a distinct set of underwriting skills, and the work does not end at the point of investment.

Understanding structural protections serves as a starting point. What converts structural positioning into durable performance is the quality of underwriting: the depth of asset-level expertise that allows a manager to better evaluate the risks and opportunities embedded in both the fundamental credit and structural components of a potential investment and identify problems before they become losses.

Underwriting expertise in ABF is a collection of highly specialized disciplines, and each sub-strategy demands a different skillset. Evaluating a consumer loan pool, for example, requires interrogating stratification data, modeling loss curves under stress and assessing the equity sponsor behind the collateral. Evaluating a C-PACE loan requires knowledge of property law, lien priority mechanics and local real estate dynamics. Evaluating infrastructure debt requires understanding contracted revenue streams, counterparty creditworthiness and the technical risks specific to a given asset. These disciplines share a commitment to asset-level rigor, but they draw on entirely different bodies of expertise.

Active monitoring is as important as the original underwriting decision. Ongoing engagement through covenant compliance reviews, servicer performance assessments and direct counterparty dialogue is what allows managers to protect value and respond decisively when conditions change.

Sourcing, incentives and the prerequisites for selectivity

The sourcing model behind an ABF portfolio, and the incentive structures surrounding that origination, are consequential dimensions of ABF investing.

The quality of assets in an ABF portfolio begins with the process by which those assets are sourced. Sourcing models in ABF exist on a spectrum, from widely syndicated origination at one end (where investment opportunities typically arrive largely pre-packaged from agent banks and issuers) to direct platform ownership at the other, where the asset manager controls the origination process entirely.

Widely syndicated origination typically offers a large and robust deal funnel, but with this approach it may be more difficult to achieve desired allocations since investors have less influence on the terms and structure. Direct platform ownership, on the other hand, allows managers to set underwriting standards from inception and negotiate bespoke terms, but it also means sourcing investment opportunities from their own captive platforms. This

Figure 3: Two approaches to ABF sourcing

	WIDELY SYNDICATED	PROPRIETARY OR DIRECT ORIGINATION
DEAL ACCESS	Pre-packaged; often already circulated to multiple managers	Early-stage involvement; first look at transactions before broad distribution
STRUCTURAL INFLUENCE	Limited; terms largely set before the manager sees the deal	Significant; manager can shape covenants, protections and pricing
UNDERWRITING	Pool- or portfolio-level; manager underwrites what is presented	Asset-level from inception; manager may set standards before loans are made
ADVERSE SELECTION RISK	Higher; manager may be seeing deals others have passed on	Lower; manager controls what enters the pipeline
INCENTIVE ALIGNMENT	Generally aligned with investors where manager retains selectivity	Manager's economics tied directly to what it originates
COLLATERAL VISIBILITY	Determined by structure as received	Manager can negotiate transparency provisions from the outset

carries an inherent tension when originators need volume to maintain profitability.

There is also a sizable middle ground in ABF that allows for large and sophisticated managers to invest in proprietary club-style transactions alongside a small group of investors or work directly with agent banks, third-party sponsors and third-party originators on proprietary transactions. With this approach, the manager will typically have more significant influence over the terms and structure of the transaction as well as be able to size the deal or allocation according to investor needs.

Regardless of the sourcing model or combination thereof, it is important for investors to understand the manager's approach and the ability of the manager to remain selective and choose only the investment opportunities that are the best fit for their client portfolios.

Building portfolios across a growing opportunity set

Innovative ABF structures are increasingly being applied to markets where the need for institutional capital is greatest.

The capital needs of energy transition and digital infrastructure buildout are massive, long-dated and no longer adequately served by traditional lending markets. ABF structures are playing an increasingly vital role in bridging that gap, expanding the opportunity set for institutional investors.

Capturing these opportunities requires both origination expertise and structural capability. For insurers managing long-duration liabilities, for example, regulatory capital requirements make the form of an investment as important as its economics. Rated note feeder structures have emerged as an important mechanism for meeting those requirements while preserving access to the full breadth of the opportunity set. Developing that wrapper requires sophisticated legal and structuring capability alongside specialist investment management. Thus, the ability to combine both is an important consideration in manager selection.

What the label doesn't tell you

The investors best positioned to capture ABF's potential are those who look past the label to the quality of protection, sourcing and underwriting underneath it.

Asset-based finance is a large and diverse opportunity set, and the ABF label itself conveys very little about what any given strategy actually offers or how it will behave under stress. Investors who approach it with the rigor the category demands can source durable income, stable cash flows and meaningful diversification from corporate credit.

The investors better positioned to capture ABF's potential have a long investment horizon and a liability structure that does not require daily liquidity. This allows them to systematically capture the spread premium that private ABF offers over public equivalents. Investors with this positioning can also approach the category with enough analytical granularity to distinguish between sub-strategies rather than treating ABF as a single, undifferentiated allocation.

The most important questions in ABF remain structural. What is the source of the protection? Who controls the origination, and what incentives surround it? Does the underwriting reflect asset-level expertise across each sub-strategy? And can the portfolio be constructed to match the investor's specific objectives? Investors who build their ABF allocations around those questions will be well positioned to capture what remains one of the most compelling opportunities across private markets.

In practice: How TIAA's General Account approaches asset-based finance

Wen-Fu Wu

Deputy Chief Investment Officer and Head of Fixed Income for the TIAA General Account portfolio

Why has private ABF grown into such an important allocation for the TIAA General Account?

As with any insurance company general account portfolio, we manage our assets to the liabilities based on core asset liability management principles. One key aspect of our liabilities is that they are relatively illiquid. As such, we are able to capitalize on the illiquidity and complexity premiums offered by private fixed income over public markets. Furthermore, as we have seen during times of market stress, public market liquidity often hasn't been there when you actually need it, so investors end up paying up for liquidity that is rarely used.

Beyond that, TIAA as an insurance entity maintains the highest possible ratings with all major rating agencies. In support of these ratings, the general account focuses on resilience and long-term returns. Our private ABF holdings as we've structured them fit our mandate well, emphasizing disciplined underwriting, a clear understanding of underlying risks, and strong structural protections, including appropriate levels of subordination.

The ABF universe is extremely broad. How do you think about what fits and what doesn't for your portfolio?

We start with a simple question: Will the cash flows hold up through a cycle? Not all ABF strategies clear that bar. For example, consumer credit strategies tend to be more cyclical and sensitive to economic conditions. On the other hand, collateral tied to commercial businesses or infrastructure assets tend to be more stable, where structural and legal protections are clearer. The objective is consistency and resilience, such that the portfolio can perform through all market environments including those where markets are stressed.

Sourcing has become a major focus. How do you think about the different models and their tradeoffs?

There is a spectrum of sourcing models from syndicated transactions created by banks to managers who own their own origination platforms.

Syndicated deals offer efficient access, but investors often pay for structuring and distribution, which can compress

> "We start with a simple question: Will the cash flows hold up through a cycle? Not all ABF strategies clear that bar."

returns, particularly as demand has increased in recent years. At the other end, investing through managers with proprietary origination platforms can provide better economics and differentiated access to collateral, but this approach requires careful underwriting of the platform itself. When revenue is driven by origination volume, the key question is whether the manager has the discipline and incentive structure to turn down assets that may be out of favor or that do not meet underwriting standards.

Where we've landed with Nuveen is somewhere in the middle: strategic partnerships and whole loan purchases directly with non-proprietary origination platforms. This balance allows us to capture better economics by avoiding intermediary fees, while retaining the flexibility to be selective and align investments with portfolio needs across evolving market environments.

The partnership with Nuveen has allowed us to collectively build a large-scale ABF capability that's grounded in deep sourcing relationships and underwritten through disciplined, specialized expertise across a range of collateral. In turn, our ABF strategy has been designed to perform well in all markets and allow us to honor our long-standing commitment to our participants.

What is the most important advice you would offer insurers and pension funds building their own ABF allocations?

Whereas public fixed income strategies tend to generate alpha through active trading and repositioning, private fixed income relies more on proprietary sourcing, disciplined underwriting, and structuring at the outset.

Scale matters in private markets. Understanding where and how alpha is generated helps in selecting the right managers, particularly those with durable access to deal flow and a long track record.

In our experience, the managers best positioned to deliver are those with scale, a consistent underwriting approach and the discipline to apply it through the cycle.

TIAA's history in private ABF

1988

Infrastructure debt

1996

Credit tenant loans

2015

Private ABS

2018

Commercial property assessed clean energy financing (C-PACE)

2022

Energy infrastructure credit

Collateralized fund obligations

2025

European NAV lending

Nuveen's private asset-based finance opportunity set

Nuveen's asset-based finance capabilities are embedded within a $688 billion[1] fixed income platform, which provides global diversification and holistic credit allocations through flexible structures.

Backed by TIAA, the fourth largest global private debt investor,[2] Nuveen has invested in ABF for more than 50 years, building specialist underwriting teams and proprietary sourcing relationships across strategies.

C-PACE (Commercial Property Assessed Clean Energy)	Financing for energy efficiency projects
DIVERSIFIED PRIVATE ASSET BACKED SECURITIES	Private lending backed by cash flows from individual assets or pools
INFRASTRUCTURE DEBT	Investment grade and non-investment grade debt secured by hard assets
REAL ESTATE DEBT	Global real estate debt
NAV FINANCING	Asset-backed lending to private European investment funds
CFO ISSUANCE	Tranches of long duration collateralized fund obligations

For more information, please visit nuveen.com.

Endnotes

Sources

1 As of 31 March 2026. Nuveen assets under management is inclusive of underlying investment specialists and does not include investments within multi-sector accounts or capital commitments.

2 Rankings published in the Private Debt Investor Magazine's Annual Review December 2025/January 2026.

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Important information on risk

Investors should be aware that alternative investments including private equity and private debt are speculative, subject to substantial risks including the risks associated with limited liquidity, the potential use of leverage, potential short sales and concentrated investments and may involve complex tax structures and investment strategies. Alternative investments may be illiquid, there may be no liquid secondary market or ready purchasers for such securities, they may not be required to provide periodic pricing or valuation information to investors, there may be delays in distributing tax information to investors, they are not subject to the same regulatory requirements as other types of pooled investment vehicles, and they may be subject to high fees and expenses, which will reduce profits.

Real estate investments are subject to various risks associated with ownership of real estate-related assets, including fluctuations in property values, higher expenses or lower income than expected, potential environmental problems and liability, and risks related to leasing of properties.

Private equity and private debt investments, like alternative investments are not suitable for all investors given they are speculative, subject to substantial risks including the risks associated with limited liquidity, the potential use of leverage, potential short sales, concentrated investments and may involve complex tax structures and investment strategies.

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