APOLLO

Asset-Backed Finance: The Next Evolution of Private Credit

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KEY TAKEAWAYS

- Asset-backed finance (ABF) is a critical tool for financing day-to-day activities for millions of businesses and consumers globally. It encompasses a broad set of credit types that touches everyday life from residential mortgages, credit cards and student loans, to planes, trains, automobiles, sports and entertainment royalties, and more, collectively making up a $20 trillion-plus market today.[1] The market is growing rapidly and we believe has become too large to be ignored.
- While the public asset-backed securities market has existed for decades, the growth of private ABF traces back to the wake of the Global Financial Crisis (GFC) in 2008, when banks reduced lending due to higher regulatory and capital constraints, limiting the capital available for asset-heavy borrowers. Non-bank lenders and specialty finance companies have grown in both number and size to address this void, becoming a critical part of today's credit ecosystem.
- Capital allocators have embraced the evolution of credit markets post-GFC by initiating or increasing allocations to private credit. While such exposure has been predominantly to private corporate credit, the increased scale and breadth of the ABF market has garnered attention, and thus we believe it provides a natural addition to corporate credit portfolios.
- In particular, ABF has historically experienced lower losses than corporates due to the nature of its underlying structures: a) diversified underlying assets that mitigate single points of failure, b) strong documentation with covenants and cash-flow waterfalls, and c) credit enhancement through bankruptcy remote and ring-fenced collateral.
- In our view, ABF is an asset class that is downside protected via credit enhancement and structural safeguards coupled with an increased level of diversification and yield at the investment and portfolio levels.

[1] Source: Apollo Analysts as of December 2022.

I. The Asset-Backed Finance Ecosystem

WHAT IS ABF?

While it might often go unnoticed, ABF permeates our daily lives by serving as a critical financing source for global businesses and consumers. To be precise, ABF describes lending in which a loan is supported first by the contractual cash flows of a pool of assets owned by a limited-purpose borrower, and then by the liquidation value of those assets themselves. This is in direct contrast to corporate credit, which relies on the full faith and credit of a borrowing enterprise for repayment.

ABF encompasses diverse credit types, such as mortgages, consumer credit, receivables, aircraft lending, and inventory finance (**Exhibit 1**). Given the comprehensive lending activity it covers, the ABF market is significantly larger than the corporate credit market. When operating normally, ABF provides the credit availability that businesses and consumers need. When this market is disrupted, we see significant strain across all markets. In fact, the Federal Reserve's Term Asset-Backed Securities Loan Facility (TALF) program was specifically designed (first in 2008, and reimplemented in 2020) to provide financing for asset-backed credit to ensure: a) continued flow of credit to ABF borrowers during periods of extreme macroeconomic volatility and b) the stability of the US economy.

Exhibit 1: ABF hides in plain sight

Where you live	Financed by mortgages
How you buy	Financed by credit-card receivables and consumer loans
What you drive	Financed by auto loans, leases, and rentals
How you pay for school	Tuition financed by private student loans
Where you exercise and go for services	Franchises financed via whole business securitizations
How you watch and listen	Music and media content financed by royalties
How you travel	Aircraft and trains financed by loans or leases
Where you work and stay	Office space and hotels financed by pooled commercial real-estate debt
What you consume	Machinery used in production of goods financed by equipment leases
How you communicate	Financing for cell phones, cell towers, fiber networks, and data centers
Who you cheer for	Media contracts financed by broadcasting rights

Source: Apollo Analysts. For illustrative purposes only.

ABF democratizes credit by allowing a broad set of market participants to engage in the financing of a significant share of the global economy. A key attribute of ABF is that the asset class is available across various risk profiles, allowing borrowers to access a wide pool of capital standing ready—collectively—to lend them money against a discreet pool of assets that are secured, diverse, transparent, easy to value, and separate from the operating entity. Because a broader set of the market can participate in the financing, there is a greater supply of capital that can help drive down the cost of financing for the borrower and, ultimately, consumers and businesses.

The ABF market has undergone a secular shift away from the banking sector (see "ABF Outlook and Conclusion") and has become, in our view, too big to be ignored.

ABF provides borrowers with several key advantages:
- Non-recourse financing that might not count as corporate debt,
- Financing that is matched to the tenor of the assets and that reduces refinancing risk, and
- Increased diversification of funding sources (not reliant solely on banks or the unsecured bond market).

Without ABF, corporate balance sheets would be burdened by existing assets and likely subject to higher funding costs from a narrower funding base. For example, a large automaker's balance sheet would be bloated by loans made to retail consumers to buy cars. The company's financial performance would then appear to be driven largely by these loans, much like a bank, which would likely make credit and equity investors hesitant to fund new business initiatives and growth.

THE ABF UNIVERSE

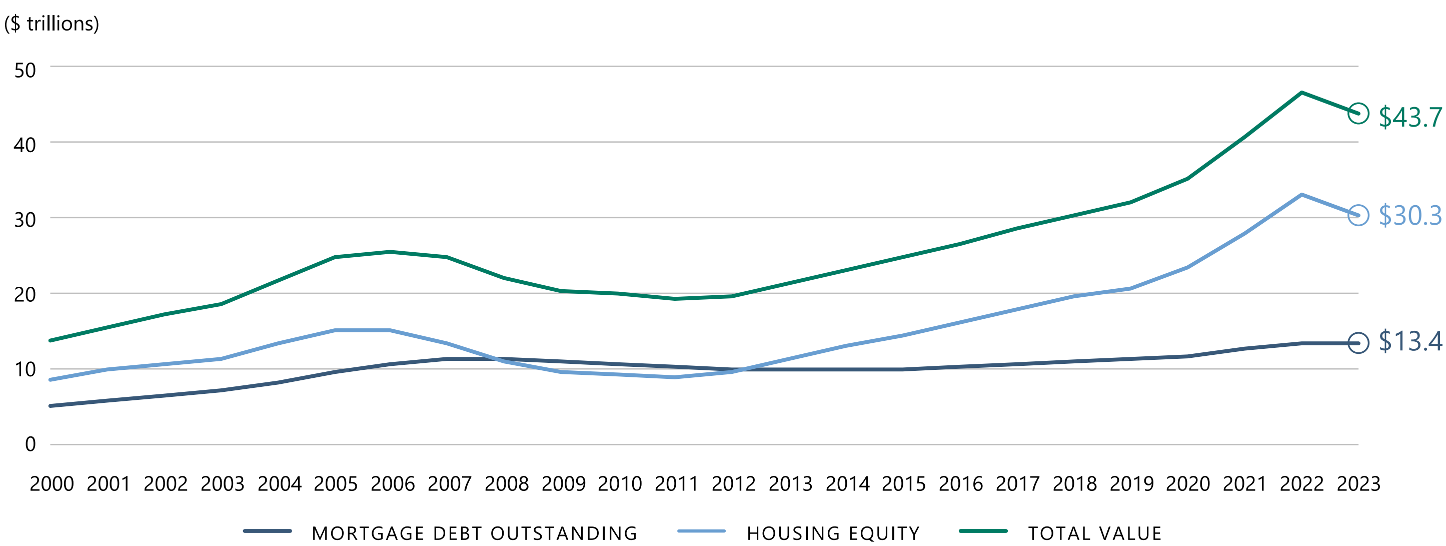
While ABF covers a broad range of assets globally, we segment the market into five major categories:

1. **Residential Mortgage Loans:** These loans can refer to both household mortgages (whole loans, described in more detail on page 6) or bonds secured by pools of residential mortgages. Today's residential mortgage loans are by and large first-lien and secured by real estate, with strong borrower fundamentals including manageable debt-to-income ratios and significant home equity. Residential mortgage loans are sold to investors in pools, thereby offering instant diversity.

   Accessed in either loan or bond format, investing in a pool of mortgage loans can provide diversification benefits (borrower, geography, loan size, loan-to-value) and seeks to reduce idiosyncratic risk, providing a more predictable stream of cash flows. For most home buyers, the purchase of a home represents the single largest purchase of their lives. With a substantial equity commitment required and the utility provided by shelter, borrowers are incentivized to stay current on their payments. In the event of a default, the lender's downside is protected by the value of the property, which traditionally has substantial embedded equity value (**Exhibit 2**). The current housing shortage in the US, for example, is supportive of recovery values, and the government has demonstrated a willingness to support the residential mortgage market in times of stress.

Exhibit 2: US residential mortgage market has substantial embedded equity value

US SINGLE-FAMILY HOUSING MARKET GROWTH



Sources: Financial Accounts of the United States and Urban Institute. Data as of March 2023.

New residential mortgage products have emerged in recent years to fulfill borrower demand. Some of these new products include non-qualified mortgages (non-QM), for those whose credit is approved via bank statements or personal assets rather than an employer-issued W-2; residential transition loans (also known as, "fix and flip"), whereby operators seek staged financing for purchase and renovation of a home; and single-family rental (SFR), in which institutional capital seeks financing on a portfolio of their professionally managed rental properties. Loan-to-value ratios are considerably lower and credit terms are considerably tighter today than before the GFC.

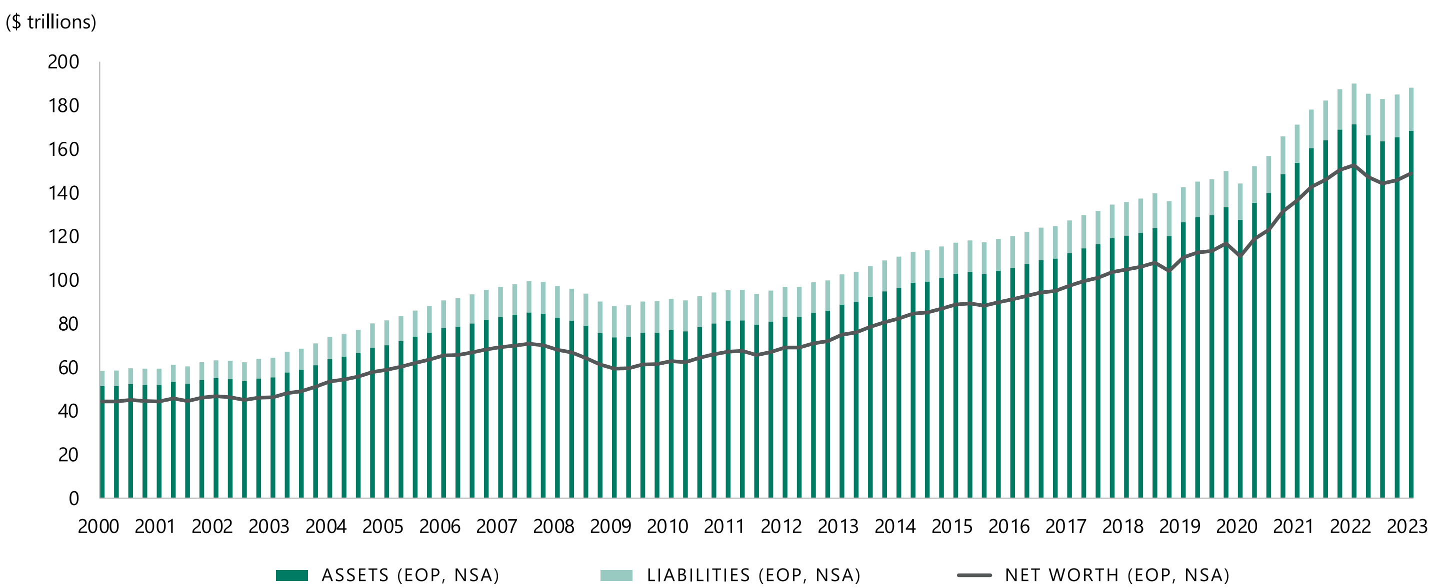
2. **Consumer Finance:** These refer to pools of loans or receivables backed by an individual's credit, willingness to pay, and, in many cases, a hard asset. Consumers often borrow to finance big-ticket items, such as automobiles, higher education, and home improvement projects. Borrowers are scored by originators based on many factors, including their credit worthiness (e.g., FICO score) and ability to pay (e.g., debt-to-income ratio). **Exhibit 3** illustrates the growth of US households' assets and liabilities.

   Pools of consumer loans can be originated or purchased through asset-backed securities. Post GFC, due to regulatory changes, many banks have restricted lending to only super-prime borrowers, leaving many creditworthy borrowers underbanked by the traditional financial system. Financial innovation and the rise of non-bank lenders have created easier access to credit for many borrowers, but a need for private capital continues to exist to fill this specific void. Pools of consumer loans are typically highly diversified given the large number of loans backing the pools and the wide range of borrowers within them. We believe expertise in credit underwriting, financial and statistical analysis, structuring, and servicing is critical to effectively analyze, originate, and structure these pools of loans.

3. **Commercial Real Estate:** These are pools of commercial real-estate loans offered in a structure, such as commercial mortgage-backed securities (CMBS), for stabilized properties, or commercial real-estate collateralized loan obligations (CRE CLOs), for transitional properties. CMBS or CRE CLOs provide diverse commercial real-estate exposure due to the variety of commercial property types, such as multifamily, office, industrial, medical, or hospitality (hotel/lodging and gaming) underlying these investments. Even with a secular shift underway across several of these property types, well-structured, well-underwritten, and diversified pooled commercial real estate can offer attractive value and downside protection versus single-property exposure.

4. **Hard Assets:** These are structures secured by the cash flows produced by loans or leases against physical assets, excluding real-estate assets. Examples of these physical assets include aircraft, rail, shipping, manufacturing or agricultural equipment, fiber networks, cell towers, data centers, solar panels, rental car, and corporate fleets. These are characterized as essential assets in a business that a company cannot operate without. There is substantial value and long-lead time to continually run these assets that a company cannot easily replace.

Exhibit 3: US household assets and liabilities have grown dramatically since the GFC



Source: Federal Reserve as of March 2023. Data, which includes households and nonprofit organizations, is quarterly, end of period (EOP), and not seasonally adjusted (NSA).

5. **Financial Assets:** This category encompasses a diverse set of cash-flow producing instruments, including royalty streams, trade finance-related assets, NAV lending (loans against the holdings of private funds), and broadly syndicated and middle market collateralized loan obligations (CLOs).

   Borrowers historically have relied on bank support for both hard assets and financial assets. The recent trend of bank lenders providing the bulk of their capital to large corporate borrowers has caused financing capacity for smaller corporate entities to dry up. ABF lenders can fill this financing need by providing upfront liquidity secured by a borrower's "mission-critical" assets—e.g., a corporation's fleet of cars, a telecom company's fiber lines, a manufacturing company's raw inputs—or a stream of cash flows sourced from royalties on intellectual property or media rights. See **Exhibit 4** for more on financial assets and other categories.

Exhibit 4: We see ABF opportunities in five major asset class categories

ASSET CLASS	TYPES OF LENDING OPPORTUNITIES	MARKET DRIVERS
Residential Mortgage Loans	• Non-QM (firsts and seconds) • Residential transition loans ("fix & flip") • Single-family rental • Legacy non-agency	• Creditworthy borrowers without traditional income—underwriting with proof of income or net worth required • Lower LTVs with significant home equity • Housing shortage supports valuations • Institutional capital takes advantage of changes in homeownership preferences or abilities (rent vs. own) • Increased bank capital requirements
Consumer Finance	• Auto loans & leases • Credit card • Student loans • Debt-consolidation loans • Home-improvement loans	• Consumer spending habits and overall health of the consumer balance sheets • Creditworthy borrower segments underserved by banks • Parental co-signers for student borrowers • Digital economy / tech-enabled platforms driving more informed credit decisions
Commercial Real Estate	• Commercial mortgage-backed securities (CMBS conduit) • Commercial real estate collateralized loan obligations (CRE CLOs)	• Asymmetric performance of asset types—office and retail vs. industrial • E-commerce trends and the impact on brick and mortar • Housing shortage and the demand for rentals • Substantial maturity wall ahead in the face of higher rates and fundamental uncertainty • Regional banks shedding assets and pulling back on new lending
Hard Assets	• Transportation • Telecom • Corporate-fleet leasing • Rental cars • Infrastructure • Agricultural lending • Residential solar • Commercial solar • Inventory finance • Equipment finance	• Trends in travel and preferred methods of transportation • Demand for alternative energy sources • Borrowers incentivized to remain current on essential assets that cannot be replaced • Corporates' desire to save net working capital
Financial Assets	• Music royalties • Sports and entertainment media rights • Trade finance • Corporate loans	• Sports clubs' desire to access cash by borrowing against broadcasting contracts • Growth of streaming and alternative methods of consuming entertainment • Growth in corporate credit, particularly private credit

Source: Apollo Analysts.

HOW TO ACCESS ABF

Flexible and tailored access to underlying exposures within the aforementioned asset class categories can be achieved via a variety of structural formats that can be either created or purchased.

In our experience, ABF borrowers are not always most concerned about achieving the best price; they are often willing to pay more for the certainty, scale, speed of execution, and flexibility that certain ABF lenders provide. While it may be possible to access ABF via tactical secondary purchases during periods of dislocation, this is mostly an originated asset class, particularly in the asset-level expertise and means of creation, providing participants with the ability to customize structure, control asset quality, and benefit from reduced credit volatility. Traditionally, ABF is accessed through four broad categories:

1. **Whole Loans:** These are un-tranched exposures made to residential mortgage or consumer borrowers. Banks historically originated and retained pools of whole loans, but given the regulatory changes in recent years, they now prefer to provide senior financing against whole-loan pools. As such, banks and non-bank loan originators sell pools of loans to non-bank investors who, depending on their risk tolerance, can choose to access loans in un-tranched format or in bank-financed format while designing a credit box that targets a particular collateral profile.
2. **Bilateral Asset-Backed Lending (Private ABF):** This market allows for bilaterally negotiated instruments, such as short-term financing facilities or private securitizations and asset-based bridge financings in which lenders with structuring expertise and a wide breadth of asset knowledge can control terms, covenants, and collateral while offering borrowers financing flexibility. Private financings often come with yield premia for scale, certainty, customization, and liquidity, and borrowers are often willing to pay more to access this financing flexibility.
3. **Public Securitizations:** Securitizations pool a diverse group of cash flowing assets and issue various levels of debt that derive their repayment from the cash flows earned from the assets. These would be commonly described as "flow ABF" or public ABS opportunities. Securitizations provide the ability to access varying layers of risk and return in a liquid format. Public securitizations trade in the open market, and they are required to supply periodic performance reporting. Buyers of these securitizations may have limited ability to control price and terms of these investments.
4. **Ownership & Control of Originators:** Owning and controlling originators of ABF assets are powerful methods to gain exposure to ABF via direct access to proprietary deal flow. Participants accessing the market in this manner can also gain rights of first refusal on originated loans or leases, and rights of first refusal on securitization debt, all while participating in the growth of the platform originator. This access point allows for potential higher investment spread given the ability to go direct to the underlying borrower, which reduces involvement of intermediaries. Similar to private asset-backed lending, combining structuring expertise and breadth of asset knowledge enables an originator to design a flexible, risk-mitigated credit box. This further allows for the potential to cross-sell and repeat existing business and further drive lower potential risk given the ability to perform direct due diligence and maintain control of the credit documentation.

Accessing ABF comes in varied forms, but they all share similar characteristics: ABF structures are backed by diverse pools of financial or hard assets that are separated from the operating company risk via a "true sale" of assets into a special purpose vehicle. Assets are identifiable, easy to value, secured, and derive their repayment from a large pool of borrowers rather than a single corporate entity.

> Traditionally, investors access ABF through four broad categories: whole loans, private ABF, public securitizations, and ownership & control of originators.

II. The ABF Opportunity Today

THE GROWTH OF ABF

Though it has gained prominence in recent years, ABF is not a novel asset class. By examining the history of the lender landscape in the US, we can see what established private credit as an asset class and draw a parallel between the growth of direct lending and what we expect will likely happen in the ABF space.

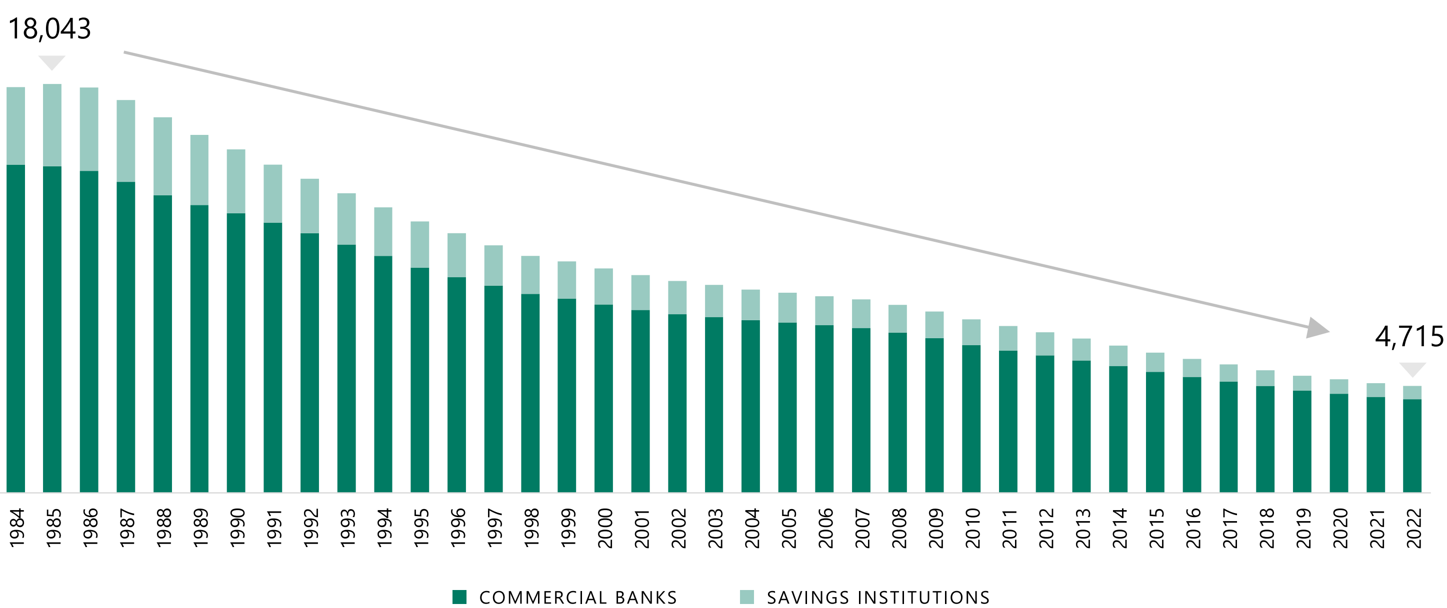
Prior to the 2008 GFC: In 1984, there were nearly *four* times the number of depository institutions in the US as there were at the end of 2022. Leading up to the GFC, banks were undoubtedly the dominant lender of choice for both corporate and asset-backed borrowers, and non-bank lending was seen as an afterthought or last resort. The banking sector experienced a consolidation wave in the 1990s as regional banks with fewer deposits were acquired by, and absorbed into, larger institutions (**Exhibit 5**). By 2008, the number of US banks had dwindled by nearly half from 1990. But as bank deposits continued to grow throughout the period, so too did the size of the banks—who in turn shifted their lending activity focus to larger corporate borrowers.

2008-Late 2010s: As the GFC ravaged the banking sector, bank consolidation continued in the crisis's aftermath. With persistent dislocation in capital markets, regulators sought to curtail bank risk taking, introducing new regulations such as the Dodd-Frank Wall Street Reform and Consumer Protection Act in the US and Basel III standards in Europe that, among other rules, require banks to hold additional capital and a greater share of liquid assets, providing additional buffers against potential future credit losses.

Exhibit 6 *(next page)* shows how US banks, which had already shifted their lending model towards larger corporate lending prior to the GFC, further reduced their commercial and industrial (C&I) lending activity in response to these regulatory reforms that came afterwards.

Exhibit 5: The US banking system has experienced meaningful consolidation since the GFC

US DEPOSITORY INSTITUTIONS



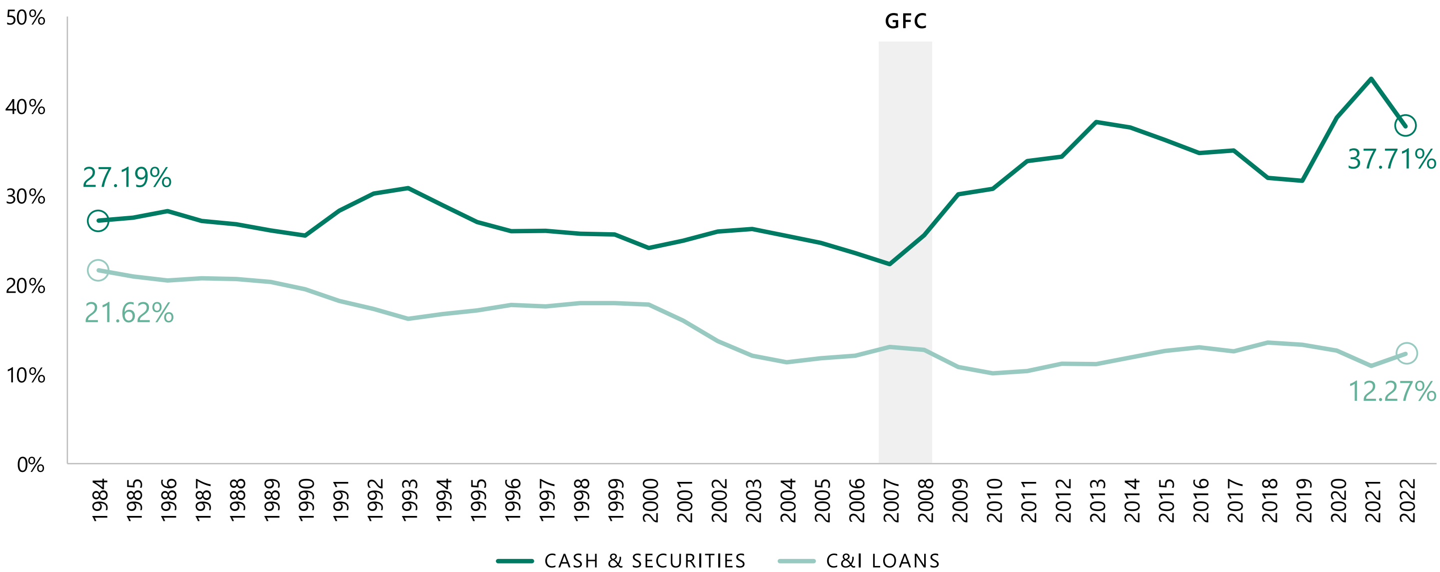
Source: Federal Deposit Insurance Corporation (FDIC); accessed July 2023.

By leaning into an "originate-to-distribute" lending model and reserving capital for the largest corporate borrowers (at the expense of lending to small- and medium-sized enterprises), banks then could originate loans, syndicate them to the capital markets, earn a fee while taking minimal risk, and repeat.

This shift accelerated the growth of new lenders serving the financing needs of the corporate middle market via private credit, moving much of the risk of this segment of the corporate credit market into privately managed, non-bank hands as bank lending continued to shrink (**Exhibit 7**).

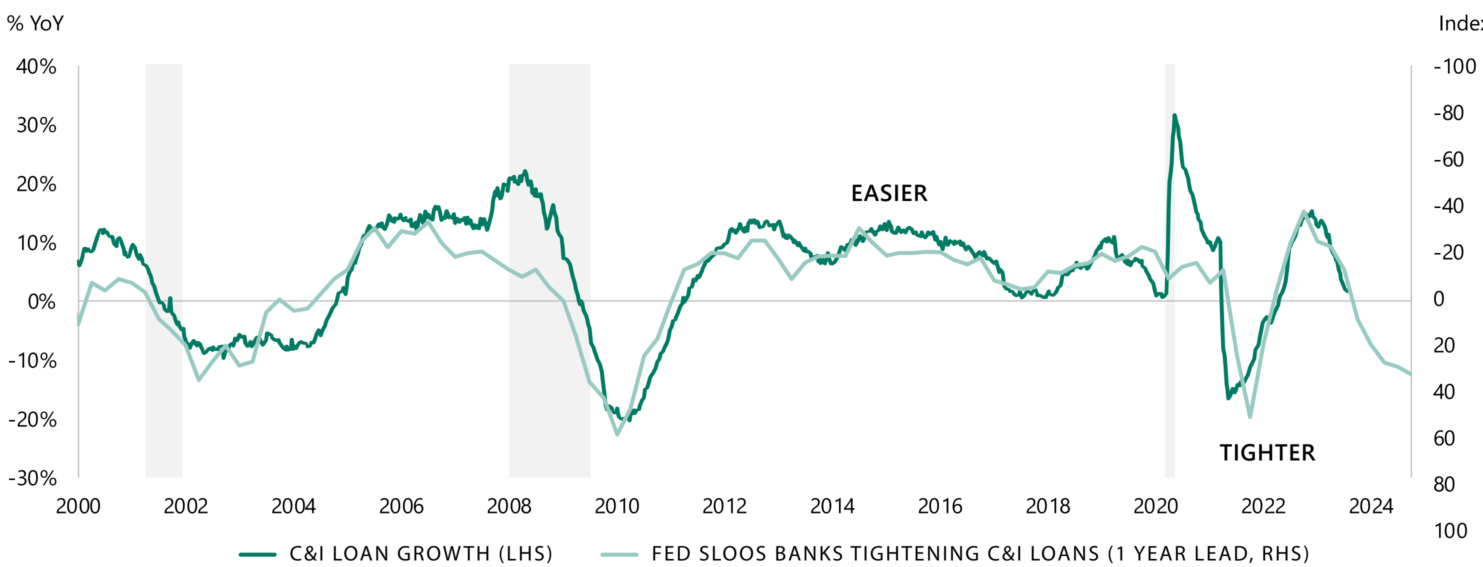
Exhibit 6: US banks have reduced C&I lending activity amid tighter regulatory environment

HOLDINGS AS A PERCENTAGE OF TOTAL US COMMERCIAL BANK ASSETS



Source: Archival Federal Reserve Economic Data (ALFRED); accessed July 2023.

Exhibit 7: Bank lending will likely shrink significantly over the coming quarters



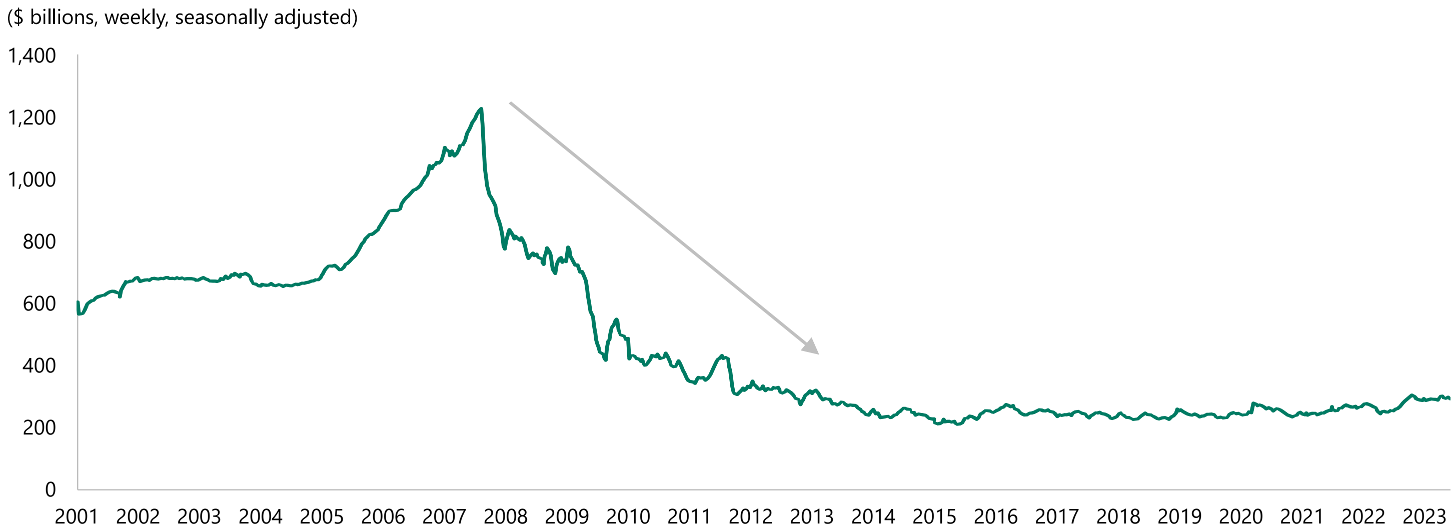
Sources: Federal Reserve Board, Haver Analytics, Apollo Chief Economist; as of July 2023. Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) refers to the Federal Reserve's quarterly survey of large domestic commercial banks and US branches of foreign banks. The survey provides information on credit availability, loan demand, and lending practices in the US loan markets.

In the intervening years, bank lending has declined in ABF too (**Exhibit 8**). The lower supply of bank lending has corresponded with growing demand from borrowers, who may achieve a better cost of financing and maintain greater financial flexibility by tapping the ABF market.

Further, the regional bank crisis in early 2023 has resulted in a pullback in traditional bank lending. We believe these events will spur an increase in bank regulation that will further restrain the flow of credit to specialty finance borrowers (**Exhibit 9**).

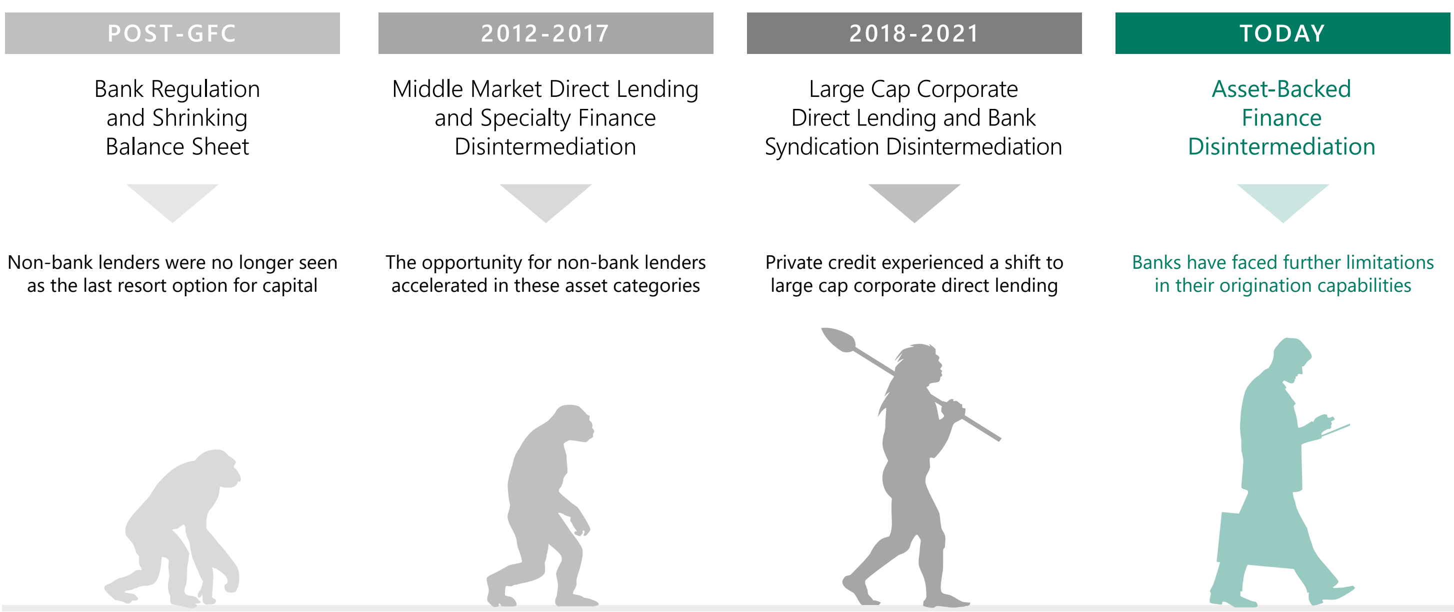
Exhibit 8: Asset-backed commercial paper outstanding has declined sharply after the GFC

ASSET-BACKED COMMERCIAL PAPER OUTSTANDING



Source: St. Louis Federal Reserve Bank database (FRED); as of August 9, 2023.

Exhibit 9: We see asset-backed origination as a natural evolution for private credit



Source: Apollo Analysts. For illustrative purposes only.

III. ABF Benefits to Borrowers and Lenders

CHARACTERISTICS OF ABF

Growth in ABF is attributable to several factors. Among them are the differentiated characteristics of ABF products (and the associated benefits for borrowers), as shown in **Exhibit 10**.

Exhibit 10: Summary comparison of corporate credit and ABF

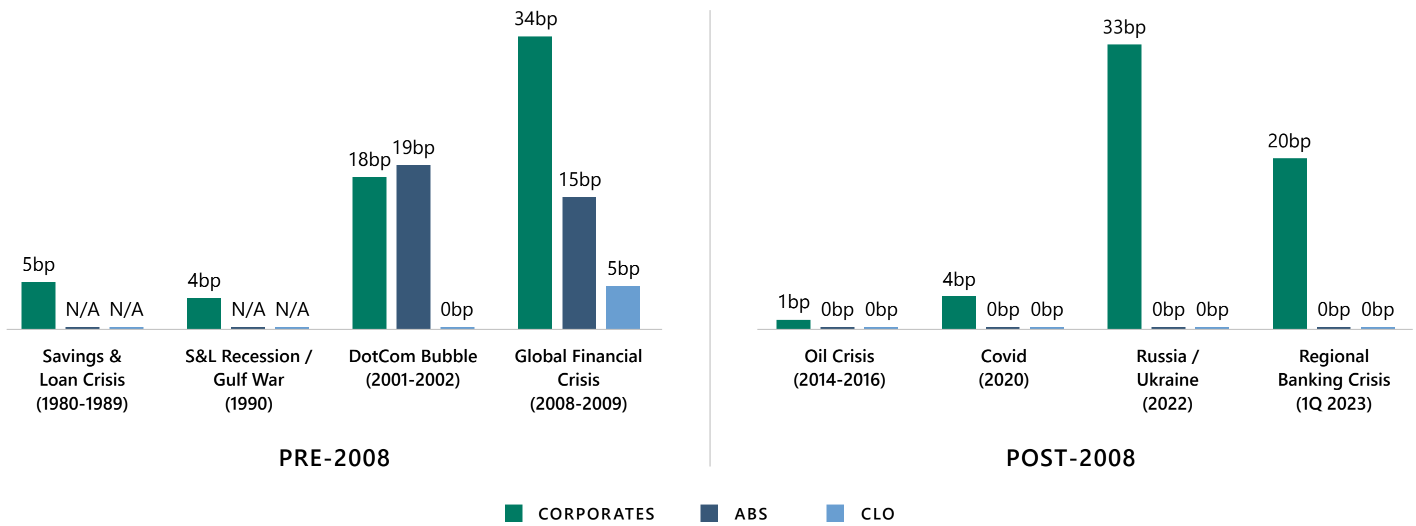
	CORPORATE CREDIT	ASSET-BACKED FINANCE
Borrower Credit Risk	• Full faith and credit of corporate entity	• Contractual cash flows of diversified, transparent collateral pool
Principal Repayment Risk	• Refinancing or sale of new debt	• Self-liquidating structure
Debt Service and Corporate Risk	• Minimal covenants • Business performance	• Protective covenants • Capture of excess cash flow • Third-party trustee
Underlying Cash Flow Risk	• Single corporate entity • Asset stripping • Restricted payments and dividends allowed	• Potentially thousands of individual borrowers • Defined waterfall for distributing cash
Inflation Risk	• Business performance from inflationary pressure	• Asset values tend to rise with inflation
Legal Separation	• Liquidation of any assets in corporate entity possible in event of corporate bankruptcy; automatic stay applies	• Borrowing entity is distinct with ring-fenced collateral, only assets in borrowing entity can be liquidated; not affected by automatic stay

Source: Apollo Analysts.

As further outlined in **Exhibit 11**, ABF has demonstrated resilience across various periods of market volatility. Public ABS and CLOs outperformed corporate debt, exhibiting significantly lower losses. Since the GFC, investment grade ABS and CLOs have experienced virtually no losses while corporates are generally more exposed to idiosyncratic or sector-specific risks. The diversification and underlying downside protections inherent in ABF have helped to protect this asset class in market crises. We outline some examples of those key traits below.

Exhibit 11: ABF has demonstrated resilience across periods of market stress

INVESTMENT-GRADE DEFAULT RATES BY ASSET CLASS (ANNUALIZED)



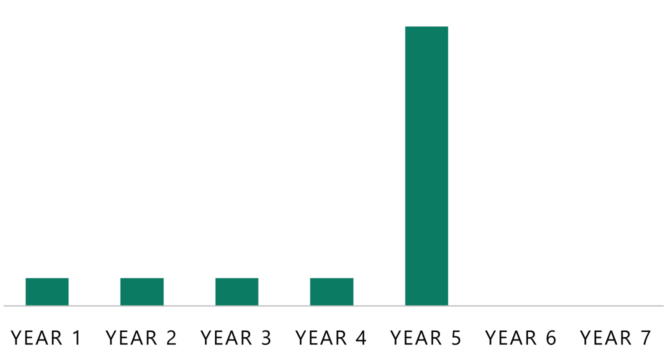
Source: Moody's as of 1Q 2023. Note: Investment grade ABS defaults are based on US ABS as defined by Moody's. Investment grade CLOs represent US CLOs as defined by Moody's, except 1Q23 where global CLO defaults from Moody's due to lack of available data on US only CLOs. CLO & ABS default data not available in savings & loan crisis & recession period due to limited ABS/CLO market at the time.

- **Contractual Cash Flows:** Traditional corporate debt is only as creditworthy as the full faith and credit of the corporate borrower, and it is unsecured if the corporate is investment grade. ABF, on the other hand, derives its creditworthiness from the cash flows of the pool of underlying assets. Many types of ABF also benefit from a secondary source of security via the collateral value that supports the loan or lease contract. For example, debt issued against a pool of auto loans does not rely on the creditworthiness of the auto manufacturer for repayment, instead relying on a diversified pool of hundreds or thousands of individual consumer borrowers making payments on their auto loans. The automobiles themselves serve as secondary collateral that a lender can seize from defaulting borrowers and sell to improve the lender's recovery.
- **Self-Liquidation and Matched-Term Funding:** Traditional corporate debt is term-mismatched and relies on refinancing when it comes due or selling new debt to repay existing principal. ABF, however, is "self-liquidating" as it typically lacks bullet maturities and a requirement to refinance debt. Debt issued by ABF structures relies primarily on the principal and interest cash flows from the underlying pool of assets, and the life of the debt is matched to the life of the cash flow of the underlying assets. ABF debt amortizes fully as the underlying assets are paid off (**Exhibit 12**).
- **Protective Covenants and Hard-Wired Cash Flow Rules:** ABF structures include performance covenants (debt service coverage tests, leverage tests, collateral quality tests, and others) that seek to protect lenders. If collateral performance deteriorates, the borrower is required to "trap" cash and/or post more collateral to de-risk the loan. A third-party trustee, appointed as part of an ABF credit agreement, controls cash in segregated bank accounts and distributes it through a set of standards and hard-wired rules, so ABF lenders have significantly reduced risk of corporate fraud or mismanagement.
- **Diversification:** Individual borrowers' ability to repay debt have a reduced impact on the whole of an ABF structure, which often contains hundreds or thousands of individual borrowers. Corporate credit is, by definition, concentrated: a corporate loan is exposed only to the corporate borrower issuing the loan.

- **Bankruptcy Remoteness:** Assets in securitizations benefit from legal separation from their sponsor. A sponsor contributes assets to the securitization (via a "true sale") and ABF debt issued against these assets relies solely on the credit performance of the assets. If the securitization sponsor files for bankruptcy, the creditworthiness of the securitization itself is unaffected as the assets contributed to the securitization are discretely separated from the sponsor.
- **Flexible Structuring and Targeted Risk Profile:** ABF allows for structuring exposures to meet the risk-return desires of investors. While corporate credit profiles are often segmented by maturity, ABF can structure various tranches of debt in the same financing to offer investors a variety of risk profiles. In addition, bilateral structures, which are privately negotiated between lender and borrower, can be designed with creativity and flexibility to meet the specific needs of both parties.
- **Inflation Protection:** ABF assets are often structured as floating-rate instruments, with coupons that reset periodically based on short-term interest rates, offering a compelling value proposition during times of rising rates or elevated inflation. The value of hard assets that collateralize many ABF structures also tends to rise with inflation.

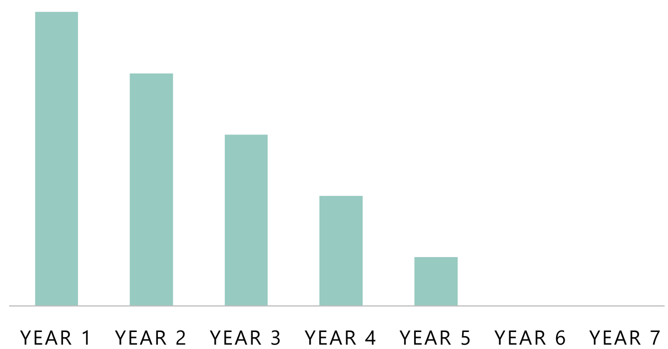
Exhibit 12: Corporate credit and ABF have distinct amortization profiles

CORPORATE CREDIT AMORTIZATION PROFILE



Typically, only produces interest-related cash flows until a refinancing or redemption of the debt.

ABF AMORTIZATION PROFILE



Amortization provisions provide for front-loaded cash flows, shorter average lives, and reduced tail risk.

Source: Apollo Analysts. For illustrative purposes only.

> ABF assets are often structured as floating-rate instruments, with coupons that reset periodically, offering a compelling value proposition during times of rising rates or elevated inflation.

Asset-Backed Finance Within the Context of Modern Portfolio Theory

Developed by Harry Markowitz in his 1952 paper, *Portfolio Selection,* Modern Portfolio Theory (MPT) sets forth guidelines for investment portfolio construction over the proceeding 70-plus years. At its core, MPT is a framework for assembling efficient portfolios of assets such that the expected return is maximized for a specific level of risk, or the lowest risk for a specified return target. In addition to expected returns, the fundamental cornerstone considerations of MPT include diversification, correlation and volatility. In essence, MPT posits that investments that increase diversification are less correlated to other asset classes, have less volatility, and improve an investor's efficient frontier—the set of portfolios maximizing expected return for a given level of risk, as measured by the standard deviation of returns. As with all other asset classes, it is important to understand the characteristics of ABF to determine how the asset class fits within the context of MPT and how it may enhance a portfolio's efficient frontier.

Key MPT Characteristics of Asset-Backed Finance:

- **Diversification:** Given the range of sectors and risk profiles, and pooling of a portfolio of underlying borrowers, owners of ABF assets gain exposure to diversity in collateral pools and can capitalize on the most attractive risk/reward opportunities. Compared to a single issuer corporate bond, an asset-backed investment is often collateralized by hundreds or thousands of different assets with distinct cash flow streams.
- **Historically Lower Correlation to Corporate Credit Performance:** Given the aforementioned underlying diversity, coupled with exposure to credit markets that are often accessed via private sourcing channels, asset-backed finance assets typically exhibit lower correlation to traditional corporate credit (**Exhibit 13**).
- **Resilience Against Volatility:** The underlying hard-asset collateral, together with the floating-rate nature of most ABF assets, may provide resilience and inherent principal protection against inflationary environments and rate risk.
- **Cash Flow Stability:** Collateral diversification, structural protections and contracted cash flows all add ballast to cash-flow profiles, helping to mitigate reliance for repayment on corporate full faith and credit. Furthermore, asset-backed finance typically offers sources of repayment beyond cash flows: Simply, if borrowers fail to perform, asset-backed lenders can sell the loan collateral or physical assets.

Exhibit 13: ABF instruments exhibit low correlation to traditional US corporates

ASSET-BACKED SPREADS TRAILING 12-MONTH CORRELATION TO US CORPORATES

Rating	US BSL CLO	US Conduit CMBS	US Private Student Loan ABS	US Prime Auto ABS
AAA	0.51	0.69	0.63	0.40
AA	0.59	0.65	0.70	0.56
A	0.69	0.70	0.72	0.67
BBB	0.74	0.73	0.70	0.65
BB	0.66	NA	NA	NA
Average	**0.64**	**0.69**	**0.69**	**0.57**

Sources: J.P. Morgan and Bank of America from January 1, 2012, through May 5, 2023. US Corporates are represented by the ICE BofA US Corporate Index; US broadly syndicated loan (BSL) CLOs from J.P. Morgan – CLO spread data; US Conduit CMBS from Bank of America spread data (OTR LCF 10-year fixed-rate conduit spreads); US Prime Auto ABS from historical spreads reported by J.P. Morgan Research; US Student Loan ABS from historical spreads reported by J.P. Morgan Research. There can be no assurance that historical trends will continue.

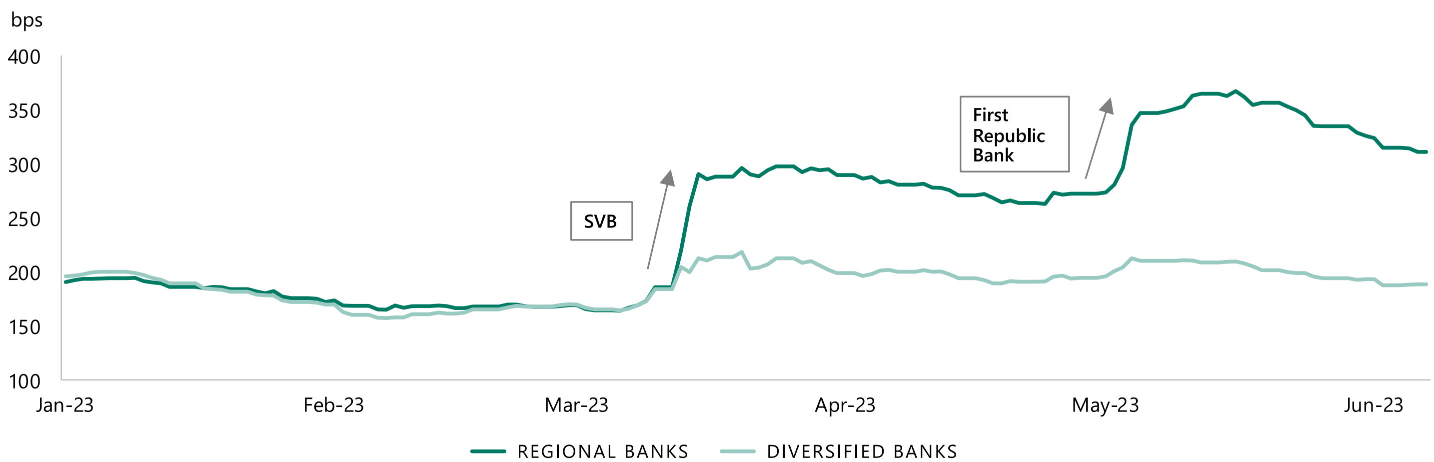
IV. ABF Outlook and Conclusion

Regulation continues to pressure banks to focus attention on only the largest clients. As banks continue to face punitive charges on all but the most liquid, highest credit quality exposures, they have become much better senior financing providers against pools of loans and much weaker owners of whole loans or other types of credit. Additional capital rules announced in 2023 have further penalized the traditional banking system, requiring higher capital, an increase in duration of bank liabilities by issuing incremental debt, and a reduction of duration of asset portfolios. As show in **Exhibit 14**, regional bank spreads have widened in the wake of these events, lifting funding costs for banks permanently.

Plentiful bank senior financing provides for attractive opportunities for asset-backed finance to become the preferred funding method for a growing list of borrowers, in our view. The borrower universe is demanding non-traditional lenders that have flexible mandates and the ability to structure and underwrite asset-backed risk. We believe that ABF's $20 trillion-plus addressable market provides significant opportunity.

Exhibit 14: Regional-bank spreads have widened post–Silicon Valley Bank failure

US IG BANKING INDEX BOND SPREADS (MATURING IN 5–10 YEARS)



Sources: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of June 6, 2023. Note: Unweighted average spreads of bonds from ICE 5–10 Year US Banking Index, C6PX Index for bonds issued before January 1, 2023. There are eight banks in the Regional index and 41 banks in the Diversified index, and Regional banks include BankUnited, Citizens Financial, Huntington, and Zions, and Diversified banks include JP Morgan, Citibank, and Bank of America.

CONCLUSION

ABF is a critical, ever-present part of our daily lives, and it is a powerful tool for capital-starved borrowers to access funds otherwise in short supply because of secular shifts in banks' lending focus (and exacerbated by recent banking sector volatility). Lending against contracted cash flows and hard assets, rather than the enterprise value of a corporate borrower, can provide an investor the ability to capture excess return, with downside protection, instant diversification, inflation protection, and low correlation to corporate credit.

Traditionally, the most common way to access ABF was via the public markets. The public markets continue to represent more liquid, on-the-run securitizations, and are a beta investment. In the public markets, pools of loans are securitized, issued under private placement regulations, and broker/dealers make secondary markets.

In recent years, private ABF has emerged as borrowers have increasingly turned to direct lenders instead of banks and the public markets for sources of financing. Private ABF encompasses opportunities where transactions are sourced via direct origination channels—rather than through public securitizations—with the ability to structure terms and collateral covenants optimized for specific risk/return profiles.

We believe owning and controlling originators capable of manufacturing risk offers a significant competitive advantage when choosing the most attractive format in which to access asset-backed finance.

We believe those with a wide breadth of asset knowledge in addition to flexible capital, deep structuring expertise, and access to origination engines stand to benefit from ABF's $20 trillion-plus market.

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