Magnetar Perspectives

Assets-as-a-Service:
Credit Investors’ Role in a Transforming Economy

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MAGNETAR CAPITAL

ABSTRACT

In this paper, we examine the partnership between two seemingly incompatible segments of the contemporary business world. On one side are tech-transformed companies whose high-growth, asset-light business models are revolutionizing a broad range of industries. On the other are alternative credit (alt credit) investors, who fuel the innovators' growth by owning or providing debt financing to a range of assets – such as real estate, motor vehicles and even intellectual property – that once would have been held indefinitely on the operator's balance sheet. Today, the innovator is looking to alt credit investors to own these assets in the long-term.

We review the path blazed by these tech-enabled businesses. We show how alt credit investors have supported their growth by effectively providing "Assets-as-a-Service." Finally, we look to a future where operators will seek a competitive advantage by crafting capital structures that leverage alt credit's flexibility and sophistication.

INTRODUCTION

To a consumer, a car is a ride. To a debt investor, it's collateral.

It's a modest observation. Yet this differing perspective about common assets has driven the growth of new business models and technologies that are transforming the economy.

Oscar Madison (left) and Felix Ungar in "The Odd Couple," as played by Jack Klugman and Tony Randall.

Photo credit: Getty Images

In this corner is the headline-grabbing tech sector. In the other is the often unglamorous debt market. Common ground may seem unlikely. It's reminiscent of Neil Simon's comedy "The Odd Couple," a play in which fate brings together two mismatched roommates—the fastidious, nit-picking Felix and the gregarious slob, Oscar.

If you were to cast "The Odd Couple" from the new economy, you might pick the skeptical, detail-oriented credit investor as Felix Ungar, and give role of Oscar Madison to the move-fast-and-break-things[1] tech entrepreneur.

More and more, however, Felix and Oscar are teaming up. The collaboration offers benefits for both.

Businesses being re-shaped by tech—which, today, is pretty much every business—may not be able to obtain debt financing from banks or traditional sources of credit. But a sophisticated credit investor can get a deal done by implementing asset-based investing techniques familiar from specialty finance. A focus on collateral makes debt capital a possibility for a whole range of asset-intensive businesses that traditional lenders previously shunned, be the assets non-standard real estate properties, vehicles, loans, cell towers, shipping containers, heavy equipment, or even intellectual property in the tech and healthcare worlds.

For more on specialty finance, see this paper's companion piece—"Specialty Finance: An Investor's History."

For the alt credit investor, a new universe of capital-seekers offers a wide range of investment opportunities. Armed with the tools required to analyze both collateral and structure, alt credit investors can sift through novel potential investments to identify ones that fit within their portfolios based on risk, return and diversification.

The convergence of new businesses with new capital sources is most visible in lodging and transportation, two industries that have been turned on their heads by sharing-economy business models. Although the COVID-19 pandemic has caused customers, operators and investors to re-evaluate aspects of these industries, their financial transformation is not over.

Airbnb is already the poster child for one-of-a-kind lodging experiences, from treehouses to room-sized wine barrels. This virtual bazaar of choices exists thanks to Airbnb's network of owner-hosts, who are mostly individuals renting out space as a sort of side-hustle. But as professional asset managers consider more non-vanilla investments, a broader range of lodging possibilities is certain to emerge. And with it, even more Instagram-worthy vacation photos.

And while Uber and Lyft have changed the world of transportation, there is another major development on the horizon: the age of autonomous vehicles. When the time comes for autonomous vehicles to go mainstream, it seems inevitable that third-party investors will own the cars. Will the creativity of alt credit investors also provide the template for new investment products—like a Vehicle Investment Trust?

This paper will review the growing symbiosis between alt credit investors and the tech-transformed economy, concluding with thoughts about what may be next. The story behind this tech-credit collaboration is organized into the following sections:

I. The Three Economic Forces that Spawned Assets-as-a-Service
II. The Corporation Unbundles
III. Tech Discovers Debt
IV. The Next Phase of Assets-as-a-Service
V. Consider the VIT—The Vehicle Investment Trust

I. The Three Economic Forces that Spawned Assets-as-a-Service

In the last decade, three major forces have brought tech pioneers and asset managers together:

1. The Increasing Dominance of Software

2. The Unbundling of Organizations

3. The Rise of the Software-as-a-Service (SaaS) Model

1. SOFTWARE DOMINANCE

In 2011, venture capitalist Marc Andreessen laid out a vision for the next phase of tech innovation in a Wall Street Journal piece entitled "Why Software Is Eating the World."[2]

"We are in the middle of a dramatic and broad technological and economic shift in which software companies are poised to take over large swathes of the economy," he wrote.

Technology was no longer confined to a single lane. Its revolutionary tools and tactics would not respect the boundaries of old-tech sectors like computer hardware and packaged software, or even the limits of Internet 1.0 businesses like search, social, marketplaces and digital media. Hospitality, transportation, crafts, sports, banking—every sector was primed for disruption.

The bravado of Andreessen's words left many questions unanswered. How can software replace business elements that are not themselves software? For example, how would it replace a bank's capital? Can you conjure a balance sheet out of a few lines of JavaScript?

2. UNBUNDLING

The answers come from another information age observer, author Clay Shirky. In his 2008 book "Here Comes Everybody: The Power of Organizing Without Organizations," Shirky describes how an alliance of companies could function like a monolithic institution—without being one.

> *Because the minimum costs of being an organization…are relatively high, certain activities may have some value but not enough to make them worth pursuing in any organized way. New social tools are altering this equation by lowering the costs of coordinating group action.*[3]

In other words, the increasing power of technology has enabled unbundled networks of large and small entities to coordinate and function seamlessly, emulating the world's largest multinational companies. You can have an org chart, but without the "org."

3. SOFTWARE-AS-A-SERVICE

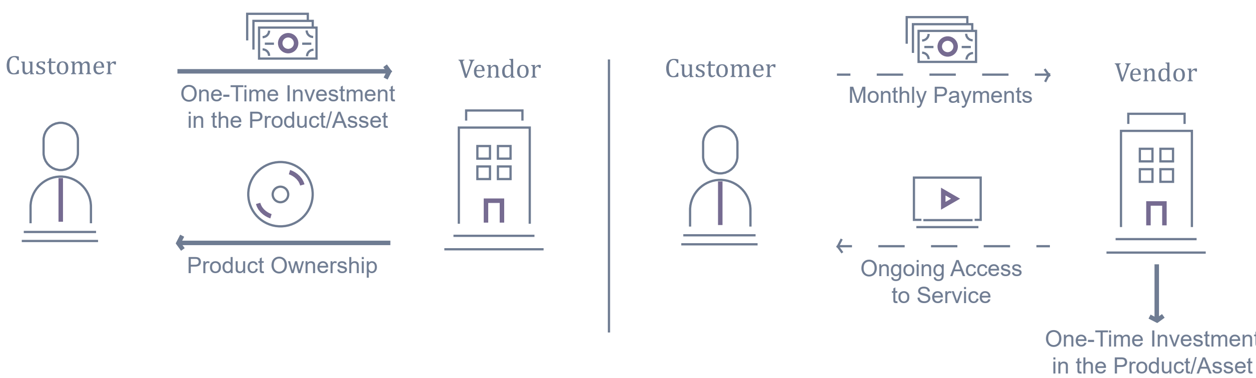
The third force is SaaS, or Software-as-a-Service—the remaking of tech products from a one-time sale of goods to an ongoing contract for services. Before SaaS, the customer bought a product by paying upfront. While the customer owned the product and its license, they also bore the financial burden of paying for it in one lump sum.

Now, rather than make a big-ticket purchase of Oracle or Microsoft Office CDs to be installed on your company's servers, you can sign up for a monthly contract to run software remotely in the cloud, accessed through the internet.

User experience was the initial motivation for the SaaS model. Netflix's success proved the superiority of a monthly-pay streaming service to a shelf full of scratchy DVDs. But SaaS is more than a customer experience construct—it is a financial construct.

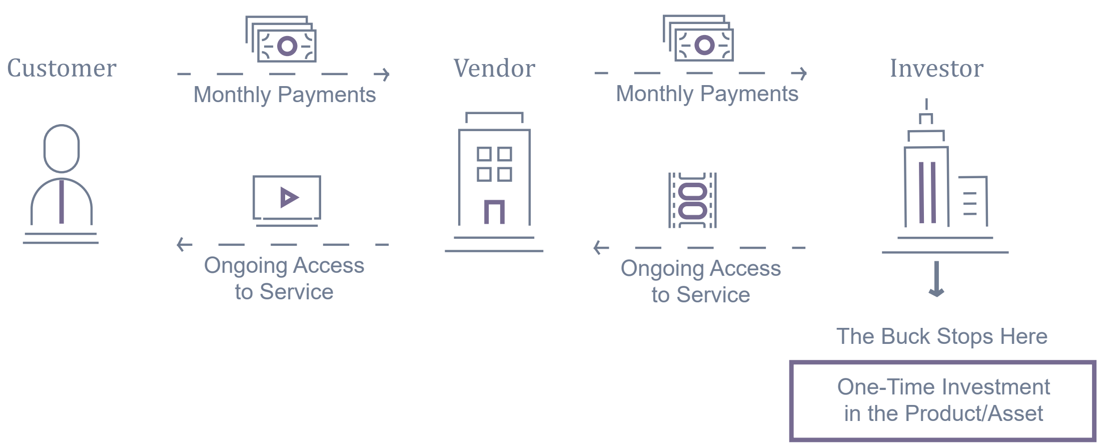
With SaaS, customers are no longer purchasing an asset. They are renting it. The vendor is paid to own and manage the asset, and is being compensated for its use in the form of monthly subscription payments.

The Pre-SaaS Model | The Post-SaaS Model



As SaaS customers, companies enjoy the financial benefits and simplicity of using an asset that someone else owns. Ultimately, this value chain may end with an investor whose business purpose is to own assets in return for future payments.

SaaS Model, with the Investor Owning the Asset



You still can't build a balance sheet out of JavaScript. But you can apply the SaaS concept to the investing ecosystem.

Consider the sharing economy companies and the "person-to-person" (P2P) or "marketplace" lenders that have provided credit to millions of online borrowers. Those companies' "balance sheets" have initially come from individuals being paid for spare capacity in their own assets—homes, cars or un-invested cash. Individuals are offering their own time—and their own stuff— "as-a-Service."

As these sectors have grown, all have come to rely on third-party investors, who can provide scalable and flexible financing for a variety of asset types—often beyond what operating companies can achieve on their own.

Credit investors' role is to provide access to capital, which they can deploy flexibly for a return on the capital provided. Entrepreneurs disrupting asset-based businesses look to investors for that product, which is effectively "Assets-as-a-Service." The availability of Assets-as-a-Service can help entrepreneurs lower their cost-of-capital versus incumbents, and in turn, fuel their ability to grow.

II. The Corporation Unbundles

Today's moment of tech transformation is not the first time the business world has experimented with different bundles of products, services, operations and balance sheets. An earlier era of change spurred Nobel Laureate and University of Chicago economist Ronald Coase to ask the question, "Why do we need companies rather than just contracts between resource providers?" Coase's answer came in his 1937 book "The Nature of the Firm." He wrote that, compared to having a multitude of outsourced relationships that require management, the bundle of functions found in a big company reduces the cost of continuously acquiring and coordinating resources.[4]

When it comes to efficiency, however, bundling giveth, and bundling taketh away. In a passage later cited by Clay Shirky[2] as inspiration, Coase wrote:

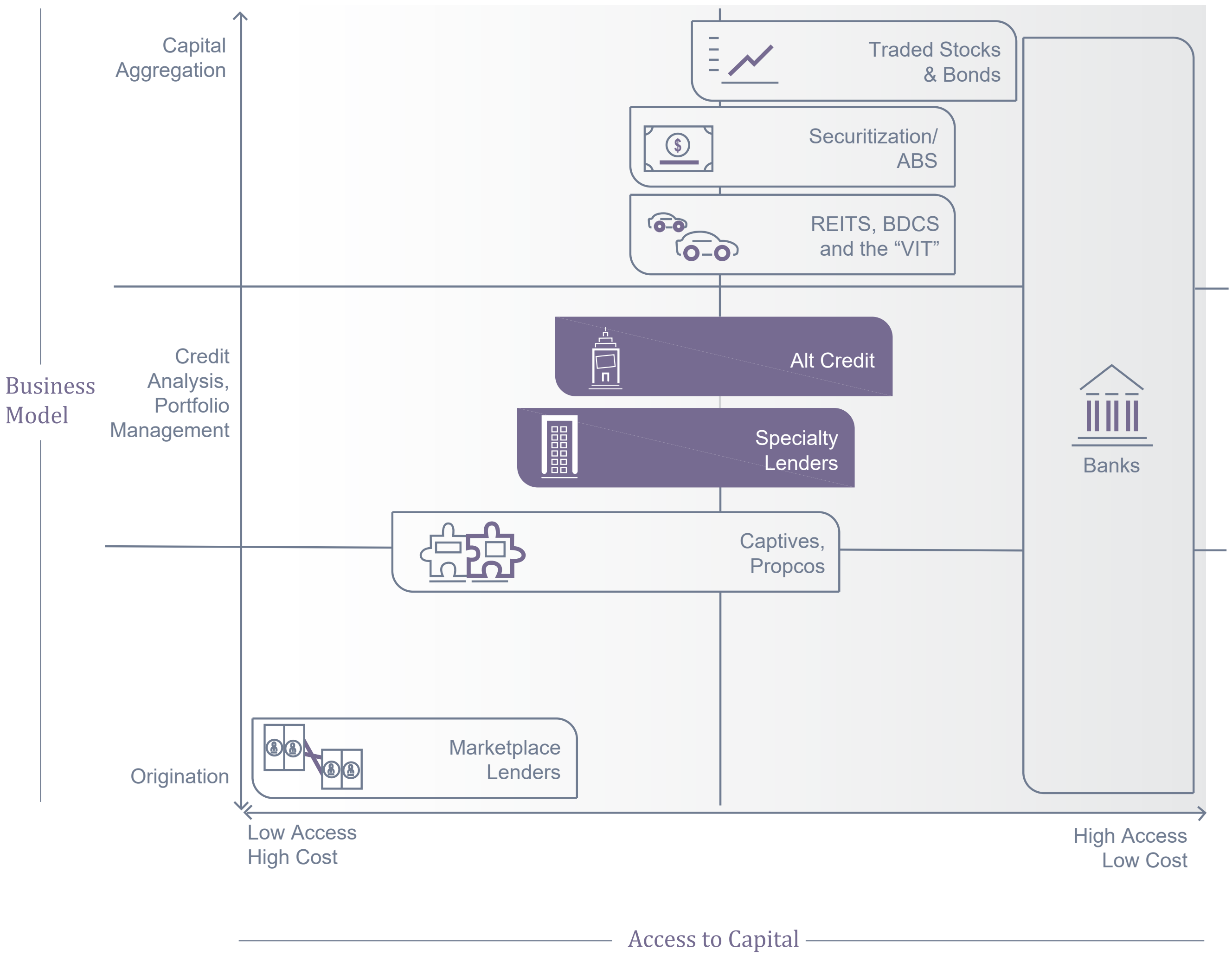
> *[A]s the transactions which are organized increase, the entrepreneur [may fail] to place the factors of production in the uses where their value is greatest...[and], the supply price of one or more of the factors of production may rise, because the 'other advantages' of a small firm are greater than those of a large firm.*

A rigid, vertically integrated company, with its excess overhead, dated tech assets and slow-moving business processes, can't adapt as easily to new market forces.

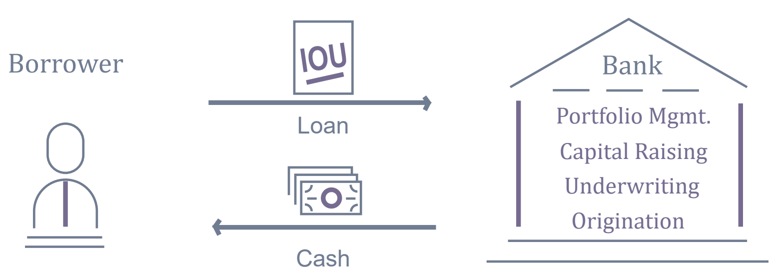
As described in this piece's sister paper, Specialty Finance: An Investor's History, the specialty finance ecosystem has many players, with a wide range of bundled and unbundled structures. These various kinds of institutions can play different roles in the value chain.

This ecosystem is shown in the following graph. The horizontal axis spans from institutions that do not specialize in accessing capital and thus bear a higher cost of capital, to those who can access capital in bulk at a low cost. The vertical axis spans from institutions that specialize in selecting assets that fit a niche to those who focus primarily on aggregating investor capital. Both cost of capital and the players' business models can determine the right configuration when working collectively.

The Specialty Finance Ecosystem



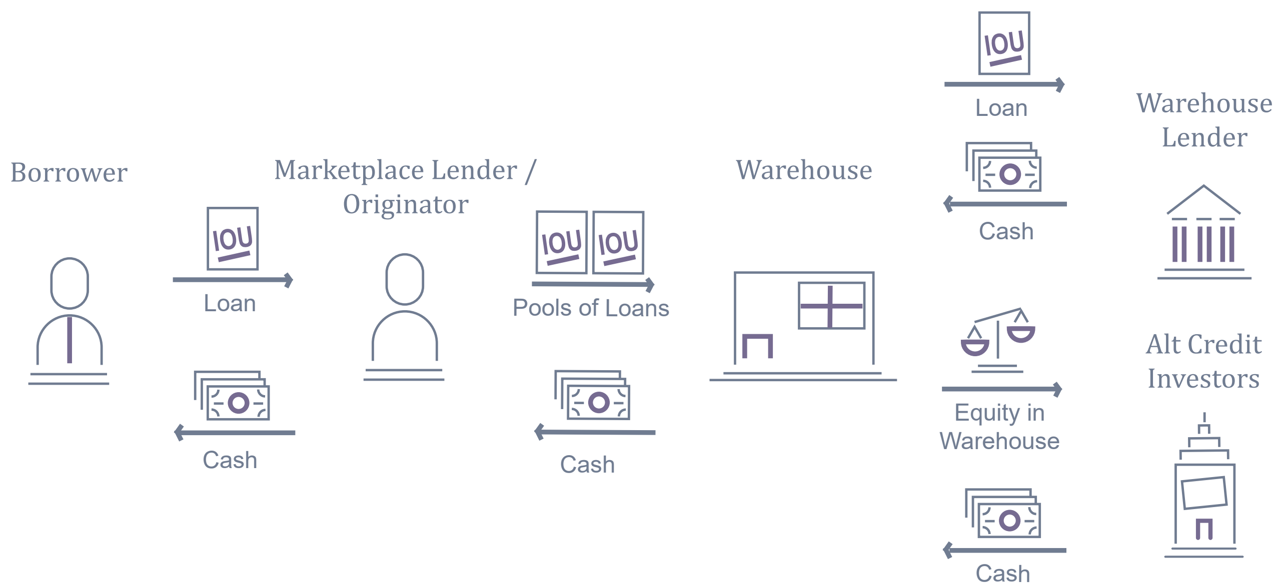
Traditional banks are "full-stack" financial institutions, ticking all the boxes from loan origination to raising their own capital:



Collaboration across the bank's functions—including deposit-taking and payment processing—can contribute to better loan performance. Bundling services gives the bank access to more knowledge about its customers and allows it to implement policies that reduce bad loans, like requiring borrowers to keep deposits at the bank.

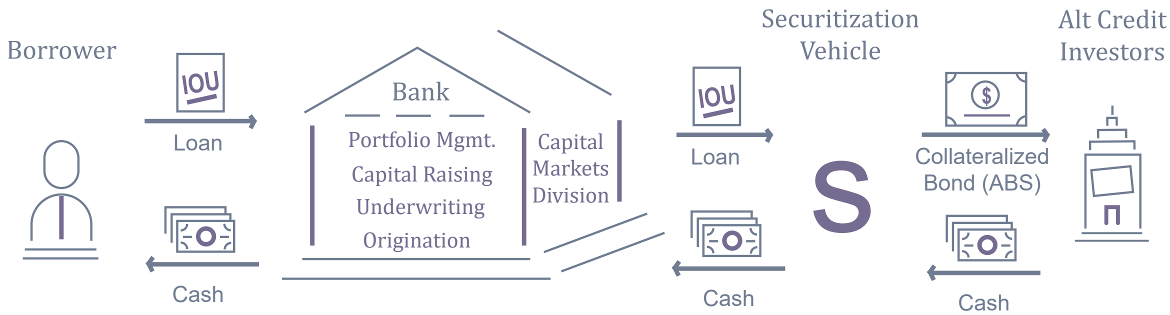
At the other extreme, marketplace lending is an example of a business model that has re-envisioned finance by deploying new technologies in loan origination. Marketplace lenders originate loans and typically own those loans for some period of time—but their focus is not to own or manage the loan on a long-term basis. That role typically falls to a third-party, the ultimate buyer of their loans. Marketplace lenders are instead focused on refining and executing their customer-facing business model:

There are many ways this dynamic model can unfold. In the diagram below, we see one model: alt credit investors provide a portion of the funds as equity in a vehicle that is dedicated to holding the assets—the "warehouse." The remaining capital is provided as debt, senior to the equity, by a "warehouse lender." That lender can be the originator, a bank, or another third-party.



The full story is more complicated. Functions on the value chain can overlap. For example, successful loan originators need to control the quality of the loans they originate for eventual purchase by investors. An originator that repeatedly foists low-quality assets on its asset management partners will find it difficult to raise capital from those partners over time. Strong underwriting standards and servicing capabilities often make a marketplace lender's assets more attractive to the ultimate buyer of the loan.

Moreover, bundled businesses can and often do choose to outsource. For example, many of the larger integrated banks routinely tap the securitization market. As discussed in *Specialty Finance: An Investor's History*, securitization can lower a bank's costs of capital in multiple ways and be a valuable source of liquidity in good times and bad. Consider the following diagram, which shows how a bank could turn its on-balance sheet loans into an asset-backed security (ABS). The bank could accumulate loans until it is ready to sell the loans (effectively playing the role of the "warehouse" in the previous diagram). Then, it could sell the loans into a "securitization vehicle" that would hold the loans as collateral for debt securities it issues to investors—like the "alt credit investor" in the diagram.



Even though the bank has a balance sheet, selling the ownership of the bank's most inefficient, capital-guzzling assets to a more efficient owner improves its return-on-equity. Asset-light tech-enabled businesses have started following a very similar approach.

III. Tech Discovers Debt

As a general rule, lenders typically shun new business models as untested and therefore too risky. This, in turn, has conditioned tech entrepreneurs and their venture capital (VC) investors to often presume that debt capital is not an option.

Viewed through the lens of direct lending—or making an unsecured loan that primarily relies on a company's future cash flows, not its assets as collateral—this is a reasonable conclusion. But the legacy industries now in entrepreneurs' cross-hairs often require hard assets. This gives specialty lending a seat at the table.

In contrast with direct lending, specialty lending is secured by a borrower's collateral. Businesses that have assets familiar to the debt markets (think cars, real estate or heavy equipment) can offer it as collateral at relatively low interest rates. Equity, in comparison, is expensive capital. While loan and bond investors fight for mere basis points, VCs aim to lock in large multiples on their invested equity capital. A 10% return on investment can be a win for a lender, but a VC may hold out for 10x.

Banks, alt credit investors and start-ups alike ultimately care about a single equation:

$$\frac{[\text{Profits}]}{[\text{Equity}]} = \text{Return on Equity}$$

Profits get all the headlines, but the denominator—the amount of equity—is key. If it rises, return on equity falls. The ability to replace a portion of an enterprise's equity capital with lower-cost debt can be like a gift to the equity investor.

Let's do the math. Consider a hypothetical new-age car rental company, CarGnG. Assume it is a unicorn that raises $1 billion at launch. Further, say it spends $800 million on a fleet of cars and the remaining $200 million to build its software.

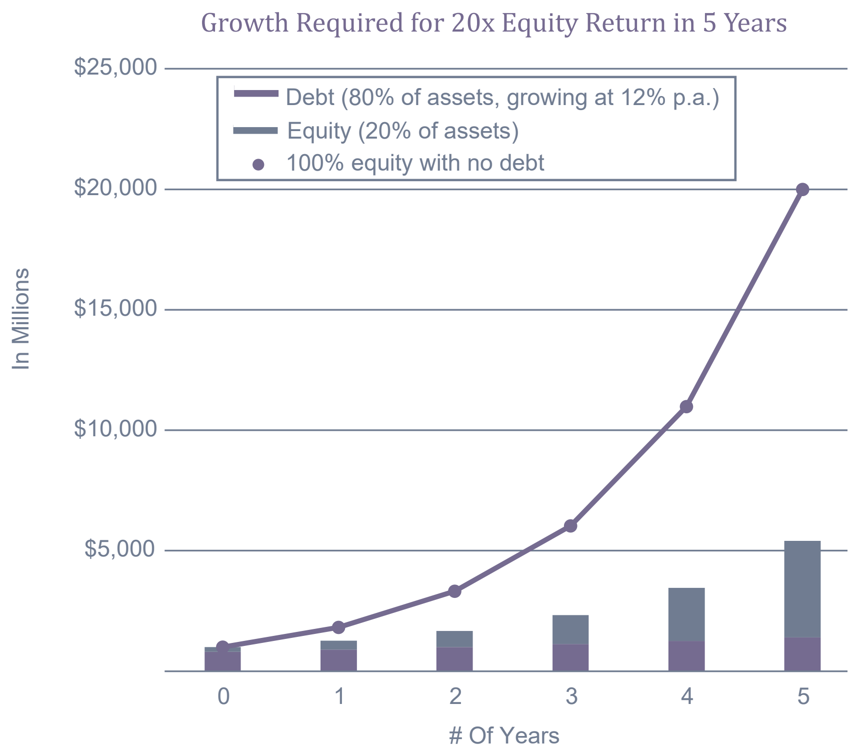
Once its $1 billion raise closes, CarGnG's balance sheet looks like this:

Assets	Liabilities
$200 Million in Software	$1 Billion in Shareholders' Equity
$800 Million in Cars	

The VCs who invested $1 billion want 20x their money in five years. That's an annualized IRR of 82%. Daunting—but in terms that are even more stark, CarGnG must create $19 billion of value.

Here, the cars' value as collateral can create major capital efficiencies. Debt can be very expensive for a start-up with no track record, but CarGnG ought to be able to bring its debt cost down significantly by securing a loan with its $800 million fleet of cars. Probably not to the approximately 4% level of a clean, vanilla car loan, so let's say 12%.

CarGnG could then take the $800 million proceeds of the loan and return capital to its equity investors.

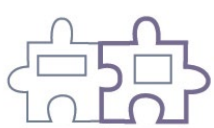


Its balance sheet would then look like this:

Assets	Liabilities
$800 Million in Cars	$800 Million in Senior Notes Secured by CarGnG'S Fleet
$200 Million in Software	$200 Million in Shareholders' Equity

The task of generating a 20x multiple on $200 million in equity—that is, $3.8 billion in increased shareholder value—is still no walk in the park. But CarGnG's management improved the company's odds of success by setting a much lower target than the original $19 billion in value it needed to create. The cost: interest on its debt amounting to a little more than $600 million (12% annually on $800 million, compounded over five years).

Further capital structure refinements are still possible. With the goal of obtaining an even-lower cost of capital, CarGnG could access alternative sources of credit:



1. Create a captive to provide debt funding.

To isolate the collateral value of the cars, CarGnG could follow the model of the auto industry and many hospitality companies. It could create its own captive specialty lender, dedicated to its assets. If lenders could take comfort in that entity's credit quality, CarGnG might achieve a 9% cost of funds, with the possibility of a higher advance rate—say 85% of assets.

2. Obtain a loan from an alt credit investor.

Assume funding at 7%, perhaps at a 90% advance rate. The investor might then seek senior financing to leverage its own investment, potentially magnifying its return.

3. Sell rated auto-backed debt to investment grade debt investors.

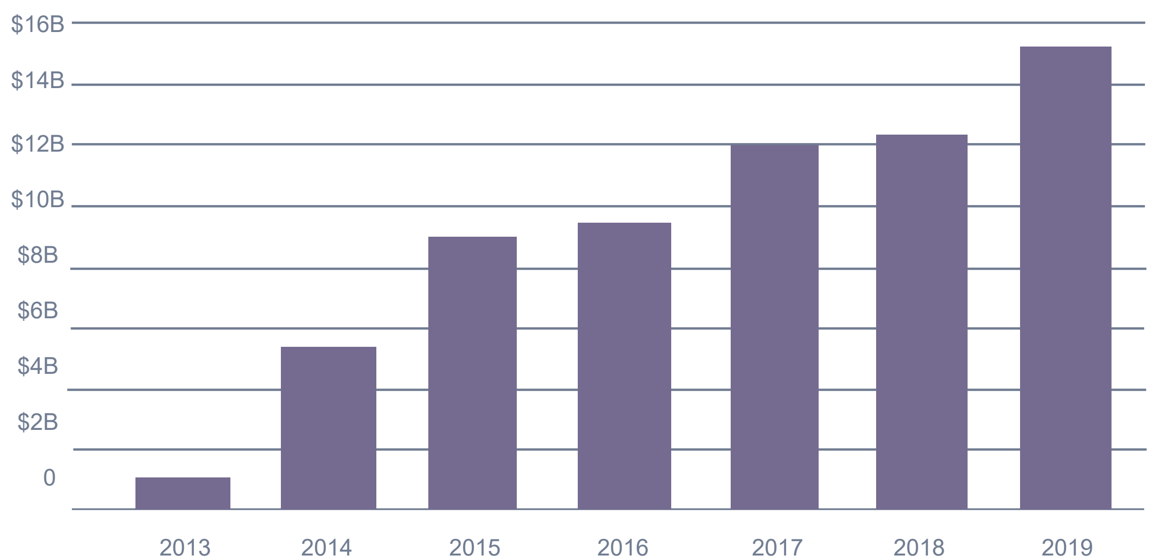
This is likely the lowest costs of funds, since investment grade bond managers require a yield only slightly above U.S. Treasuries. Call it 4%, and with an advance rate of 95%.

This sort of capitalization strategy—parceling out debt and equity stakes to the most efficient holders—makes everyone happy. Debt investors own collateralized assets they like and that deliver a fair return. Equity investors and the business's management have a better chance of achieving their return objectives, with a more leveraged, minimally diluted capital structure.

IV. The Next Phase of Assets-as-a-Service

In the annals of "software eating the world," marketplace lending has been a success story. The sector has grown originations impressively by harnessing the power of the internet, automation and predictive analytics, as well as by delivering an increasingly sophisticated online customer experience.

U.S. Marketplace Loan Originations



Source: finsight.com. "ABS Esoteric: Consumer & Marketplace Loans - New Issue Volume." 2013-2019. As of January 31, 2020.

Marketplace lending's asset-light business model means that, while it typically arranges to own loans initially, those assets must eventually find a home with one or more third-parties. But those assets follow a familiar journey. Through the decades, investors have worked with a wide range of third-party loan originators.

The financing desk in a car dealer's showroom is a modest example, as it matches car buyers with lenders who can fund the purchase. That lender's job is the same, whether the lender is Lending Club or Lenny on the financing desk: evaluate the loans and pick good ones. Marketplace lenders can and do participate in several phases of the lending value chain, their focus is to interact directly with the borrower with more efficiency, more tools and more ambition.

Where things get interesting is with more complex assets and business models spawned by the innovation economy. The examples of short-term home rentals (Airbnb) and ridesharing (Uber and Lyft) are again instructive.

In addition to new and different customer experiences, each of these businesses has quietly adopted radically new financing models. In both sectors, the operators are also the owners. Those individual owner-operators are providing “Assets as-a-Service”—and at no direct cost to the company.

Compare Airbnb to traditional hospitality businesses. Marriott International’s real estate is owned by its own PropCos, by owner/operators, by private real estate investors, and by public vehicles such as Real Estate Investment Trusts (REITs). And its debt is held by banks and credit investors—both public and private—through direct loans, bonds and ABS.

Marriott, however, must pay the cost of the capital on the real estate it owns, and it must pay rent or lease payments from property it does not own. For Marriott, the assets are not free.

In contrast, the owner-operator is a flexible resource for Airbnb, expanding or contracting the inventory of available rooms based on the owner-operator’s desires and financial requirements. This expandable-and-collapsible inventory has proven no constraint to Airbnb’s growth. In 2017, Airbnb held three million rooms in inventory. Marriott had 1.2 million.[5]

With its established network of hosts and guests, and determination to keep refining its model, Airbnb is formidable competition. But its competitors’ ability to shop for capital may help them target market segments where Airbnb might be vulnerable.

> “...the traveler’s desire for character, quirk and an Instagram-able vacation is a curveball for traditional investors.”

There is ample space on the spectrum between Airbnb’s quirky catalogue of lodging options and big hotels’ standardized highly-controlled experiences. Hospitality brands are emerging to stake out their niches. The potentially transformational effect of COVID-19 also places a higher value on professional hospitality management. Travelers will demand top quality hygiene and disease-prevention, seemingly playing into the hands of institutional owner-operators with more resources. Yet, the traveler’s desire for character, quirk and an Instagram-able vacation is a curveball for traditional investors. Analyzing a destination retreat on a remote Indian Ocean island would be above most traditional investors’ paygrades.

This plays into the hands of alt credit investors. A hospitality brand featuring unique-but-difficult assets must think hard about who to approach for capital. Alt credit investors with their sophisticated financial toolkits, creativity, flexibility and long-term orientation—are obvious candidates.

Thinking broadly, one can imagine a hospitality world with proliferating business models, offering travelers increasingly diverse lodging options, and creating more and more diffuse financing needs—and relationships with more and more financing partners. The whole sector could become very dynamic, an ongoing square dance between operators and capital providers, a reel of continuously changing business partners.

For Coase and Shirky, the seers of unbundling, this would be the future they envisioned.

V. Consider the VIT—The Vehicle Investment Trust

As outlined above in “Tech Discovers Debt,” companies with debt-friendly collateral will often gravitate toward bond and loan markets for capital. Similarly, the subset with very standardized collateral will be drawn to the parts of the market that offer the very lowest costs of capital.

From time-to-time, well-known, standardized collateral with a major financing need has been met by a capital markets' innovation that taps the most competitive and abundant source of capital: the broad, regulated public investment markets.

Given the course taken by both technology and capital markets innovation, we may witness such an innovation in the coming decade. Ride-sharing's future is one powered by autonomous vehicles. So, when Ubers drive themselves, who will own the cars?

There is a precedent. Cars are very popular collateral in the ABS markets. More specifically, rental car companies are already financing their fleets in the capital markets, with around $10 billion in securitizations over the last year.

U.S. Fleet and Rental Car Securitizations

Enterprise Rent-a-Car	$3,006M
AVIS Budget Group Inc.	$2,600M
Hertz Global Holdings Inc.	$2,150M
Element Fleet Management	$1,400M
Automotive Rentals Inc.	$554M
Wheels Inc.	$509M

Source: finsight.com. "ABS Esoteric: Rental Car - New Issue Volume" and "ABS Esoteric: Fleet Lease - New Issue Volume." Compiled trailing twelve month fleet and rental car securitizations, as of January 31, 2020.

These numbers are dwarfed by what's possible in a self-driving future. In 2015, there were 111 million private cars registered in the U.S.[6] At, say, $10,000 each, that is a total value of $1.11 trillion. If autonomous vehicles replace even a percentage of that figure, a vast amount of capital will be required to fund them.

At first, operators like Uber and Lyft may establish captive financing arms to own the cars and tap the car-savvy capital available even now in public and private markets.

> "Like a REIT, the Vehicle Investment Trust (VIT) could be a special purpose trust that is independent from the ride-sharing companies but earns a return from renting or leasing the driving services to the operating companies."

But think about the next step. Could the era of autonomous vehicles spawn a new investment product—The Vehicle Investment Trust, or VIT? Vehicles would be owned by VITs, just as real estate is currently owned by Real Estate Investment Trusts (or REITs). REITS were established by Congress in the 1960s to fund development and give all investors access to income-producing real estate. Like a REIT, the VIT could be a special purpose trust that is independent from the ride-sharing companies but earns a return from renting or leasing the driving services to the operating companies.

CONCLUSION

Emboldened by the waves of innovation washing across the economy, entrepreneurs are venturing into sectors where they have not gone before. While asset-heavy sectors like banking and real estate might have seemed off-limits, the value of those sectors' assets as collateral for debt has given investors good cause to collaborate with these innovators. That odd couple—tech entrepreneurs and credit investors—has posed formidable competition to legacy companies whose bundled organizational structures have become more burden than strength.

As this continues, we anticipate entrepreneurial businesses will continue to work with alt credit investors, driven by the need for a lower cost-of-capital and the challenges of novel collateral. Alt credit investors will enable operators to pursue asset-light business models by buying or lending to the operators' assets. The credit market may become the eventual owner of the assets—in effect, this is "Assets-as-a-Service." In the broader economy, other parts of tech value chain will seek out low-cost, commoditized financing solutions. And ultimately—as the VIT may show—new commoditized investment products will emerge to meet innovators' needs.

FOOTNOTES

[1]Facebook Inc.'s pre IPO S-1 Filing says, "We have a saying: 'Move fast and break things.' The idea is that if you never break anything, you're probably not moving fast enough." February 1, 2012.

[2]Andreessen, Marc. "Why Software Is Eating The World." The Wall Street Journal. August 20, 2011.

[3]Shirky, Clay. "Here Comes Everybody: The Power of Organizing Without Organizations." Penguin Group. February 28, 2008.

[4]Coase, Ronald. "The Nature of the Firm." Economica. Blackwell Publishing. 1937.

[5]Farronato, Chiara and Gary Pisano. "Marriott International: The Next 90 Years." Harvard Business School Case. Revised November 2018.

[6]U.S. Department of Transportation Federal Highway Administration, Office of Highway Policy Information.
"State Motor-Vehicle Registrations – 2015." https://www.fhwa.dot.gov/policyinformation/statistics/2015/mv1.cfm.