

DESTINY THE UNICORN REPORT

01

2021 YEAR IN REVIEW

The Unicorn Report

It wasn't long ago that unicorns – private companies with valuations exceeding \$1B – held near-mythological significance in the world of Silicon Valley and the world at large.

**Today – not so much.
2021 was the year of the Unicorn Stampede.**

Abundant dry powder has met explosive value creation across domains, producing a dizzying array of well-capitalized, world-beating unicorns, decacorns, and Chinese dragons*.

Software has eaten the world and now runs it.

Technological innovation has permeated every facet of daily life, forever changing the way we travel, transact, and interact.

The market for unicorn businesses is now an asset class unto itself, a \$3.57T powder keg: larger than the combined value of the U.S. Defense budget, North American professional sports, and the national GDPs of Switzerland, Singapore, South Africa, Israel, and Chile. It's enough value to take the U.S. stimulus in 2020... and nearly double it.

While late-stage private technology has grown into a multi-trillion-dollar asset class, few comprehend its far-reaching implications or its magnitude. Even fewer are aware that this growth has taken place.

Investment in private companies has been, and continues to be, limited to the top 1% wealthiest individuals in the world.

The deliberate exclusion of 99% of the world's population from generation-defining innovation is not built to last – yet it has.

Only by shining light on today's divisions can we overcome them.

The Unicorn Report is the first step on this path to a better future: a comprehensive research offering that, for the first time, details the historical growth of the unicorn business as a global investable asset class.

We are excited to share the report with you and look forward to a long and fruitful run together as we set out to create a more equitable investment ecosystem – **one in which anyone can own the future, today.**

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Tech-driven transformation is on a tear, with the global market for unicorns now standing at a princely sum of \$3.57T. The unicorn market has added \$1.16T in value this year alone and, at time of writing, was on pace to bring this figure to \$2T, close to the size of the entire market in 2020.

006 The Unicorn Diaspora

While the U.S. and China have historically dominated unicorn league tables, 2021 marks the year those tables turned. Non-core geographies now represent over 50% of global unicorn value and have produced local-turned-global leaders in payments, banking, and ecommerce.

013 Rapid Growth, False Narratives?

Unicorn companies are not staying private longer – they never were. Instead, the *very largest* unicorns are staying private for an additional two years, and, in that time, they are growing bigger than ever faster than ever before.

025 Clipped Wings

China lost its global market lead in 2021 to the US and is at risk of losing almost half of its value in the coming year. We review the market's composition and posit that the nation's tech crackdown can be understood through three considerations – rail building, population-first policy, and a "spice-driven" move from bits to atoms.

Data Sources: Destiny DD, Pitchbook, Refinitiv, Crunchbase, CB Insight, Preqin, S&P Market Intelligence, BvD

*Dragons: China-based decacorns (See: "Clipped Wings")

The Unicorn Stampede

Top 25 Venture-Backed Unicorn Businesses by Market Capitalization

Q4 Leader Exits

Planned or announced : Nubank, Rivian, Paytm, Grab

Tech-driven transformation is on a tear, making unicorn status – once an awe-inspiring feat of scale in the private markets – an achievable target for companies at **any** maturity, assuming the addressable market is large enough or the fit with existing customer needs is sufficiently demonstrable.

In turn, unicorn activity – nearly all tech-driven, or tech adjacent – has proliferated, as the market for such businesses has grown at an annual rate of **43% since 2014** when accounting for the effect of compounding.

D.XYZ Portfolio Company

No.	Company	Q3 Valuation	Country	Overview (15 words or less)
1.	ByteDance	\$360B	China	Ephemeral content at odds with prolonged private market stay. Will AI arm BytePlus take off?
2.	Stripe	\$152B	United States	Ride shows no signs of stopping for the rails of the US/EU financial ecosystem
3.	SpaceX	\$100B	United States	Elon Musk's third company, the second to take net worth to stratospheric heights
4.	Reliance Retail	\$63B	India	None have gained more from India's retail revolution. Dominates locale, spans verticals, and still hungry
5.	Klarna	\$46B	Sweden	Buy now, pay later behemoth scaled rapidly during pandemic. Can momentum offset coming regulation?
6.	Canva	\$40B	Australia	Consumer design leader puts recent influx of capital to work with global enterprise expansion
7.	Instacart	\$39B	United States	Grocery disruptor dominates online market and is out to eat the lunch of others
8.	Databricks	\$38B	United States	Public markets eye up their second data lakehouse. Can it replicate Snowflake's success?
9.	JUUL	\$38B	United States	Big business in the wrong demographics, ESG and legal issues abound
10.	Revolut	\$33B	United Kingdom	EU fintech started with transfers and now turns to new markets and cross-selling. What sticks?

No.	Company	Q3 Valuation	Country	Overview (15 words or less)
11.	Waymo	\$31B	United States	Google spin-off became first commercial self-driving service last year and is primed for further expansion
12.	Nubank	\$30B	Brazil	LatAm neobank targets IPO at \$50B, setting precedent for others in budding market
13.	Epic Games	\$29B	United States	Well-positioned at convergence of online / offline worlds. Leg up on Facebook in the self-referential branding game
14.	Rivian	\$28B	United States	Electric truck manufacturer has IPO plans. Less dependent on downhill pushing than peers
15.	Chime	\$25B	United States	Boom times have been a boon for business at biggest U.S. neobank
16.	BYJU'S	\$20B	India	Beneficiary of China's edtech crackdown. Has it done its homework ahead of U.S. expansion?
17.	JD Digits	\$19B	China	Last JD spin-off left in private markets hopes to emulate success of two \$25B+ predecessors
18.	FTX¹	\$18B	Antigua	Crypto wundercorn ² with pile of cash, ready to replicate Coinbase's proven model of acquisition-driven platform growth
19.	Fanatics	\$18B	United States	Sports retailer spun out card business for \$10B. Is NCAA court ruling its Achilles' heel?
20.	Paytm	\$17B	India	Forthcoming listing planned for latest and greatest Indian superapp; differs from others in fintech roots
21.	DJI	\$16B	China	World's top drone manufacturer has transcended consumer roots. Can it handle heightened security concerns?
22.	Yuanfudao	\$16B	China	New edtech regulations ban the company from making money. Nice while it lasted
23.	Checkout	\$15B	United Kingdom	Transaction processor coasted up on ecommerce tailwinds, sees growth prospects in cards and crypto
24.	Grab	\$15B	Singapore	Southeast Asian superapp continues to roll out offerings, though must fend off heightened local competition
25.	Shel¹	\$15B	China	Social commerce and fast-fashion disruptor has seamlessly threaded the line between East and West

* All valuations are USD and as of October 18, 2021

¹ Elevated valuation to \$25B with \$420.69M round dated October 21, 2021. Nice.

² Wundercorn refers to companies achieving unicorn status within three years

of their date of founding. See "Rise of the Wundercorn" for further detail

Market Characteristics

The Unicorn Market has added \$1.16T in value this year alone and is on pace to bring this figure to \$2T, close to the size of the entire market in 2020.

Once-nascent or insipid tech markets outside of the U.S. and China have established themselves as attractive alternatives for investors – or as competitive opportunities in their own right. The Unicorn Diaspora (covered in-depth in the following section) continues unimpeded as inflows of talent and capital diffuse throughout non-core unicorn markets such as Europe, India, and Latin America.

U.S Takes the Lead. The United States accounts for 63% (\$733B) of the value added in 2021, 61% of which is attributable to “new unicorns”: companies that achieved unicorn status this year. As detailed later in this report, however, this dynamic is only one of the two main drivers of growth from core unicorn markets – over \$300B has been added this year alone by the three largest incumbent unicorns, \$170B of which is attributable to Stripe and SpaceX.

This breadth, to go with the added depth of new entrants, **has the United States’ unicorn market positioned ahead of China for the first time since 2018.**

+43% ANNUAL GROWTH
2014-2021 CAGR

954 TOTAL UNICORNS
AS OF OCT 18 2021

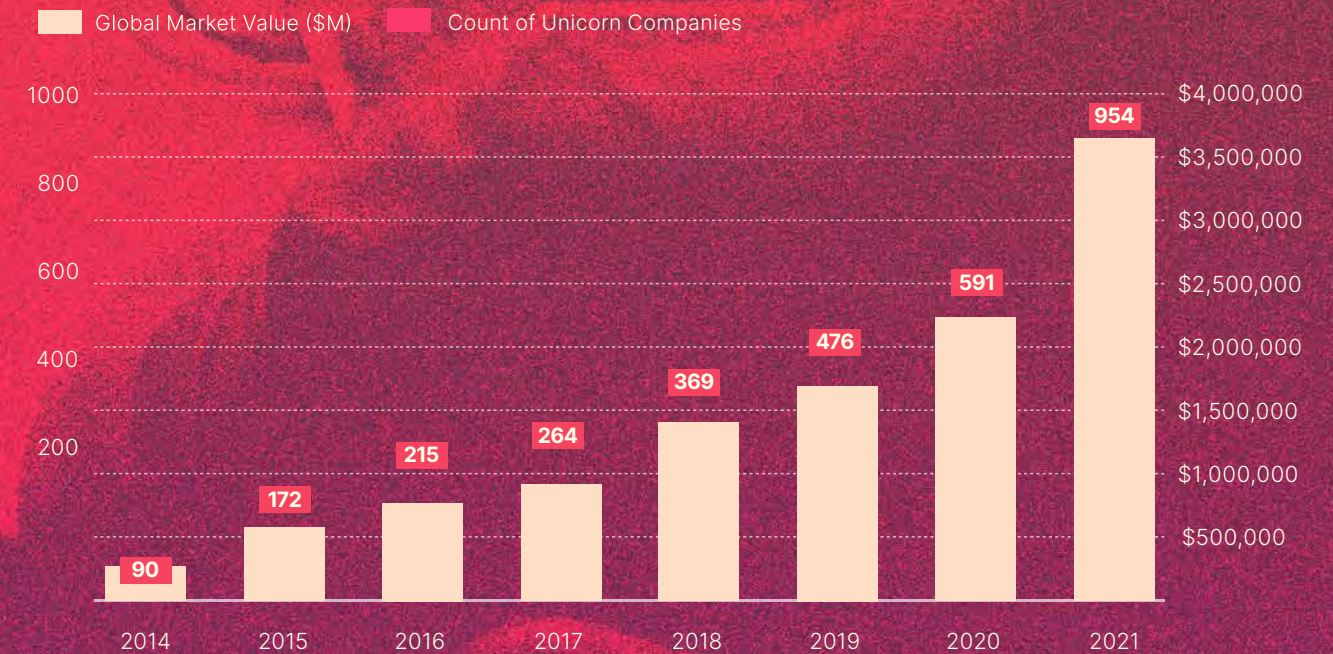
\$3.57T MARKET CAP
AS OF OCT 18 2021

Surprisingly, the composition of new U.S. unicorns in 2021 does not indicate a significant move away from the West Coast.

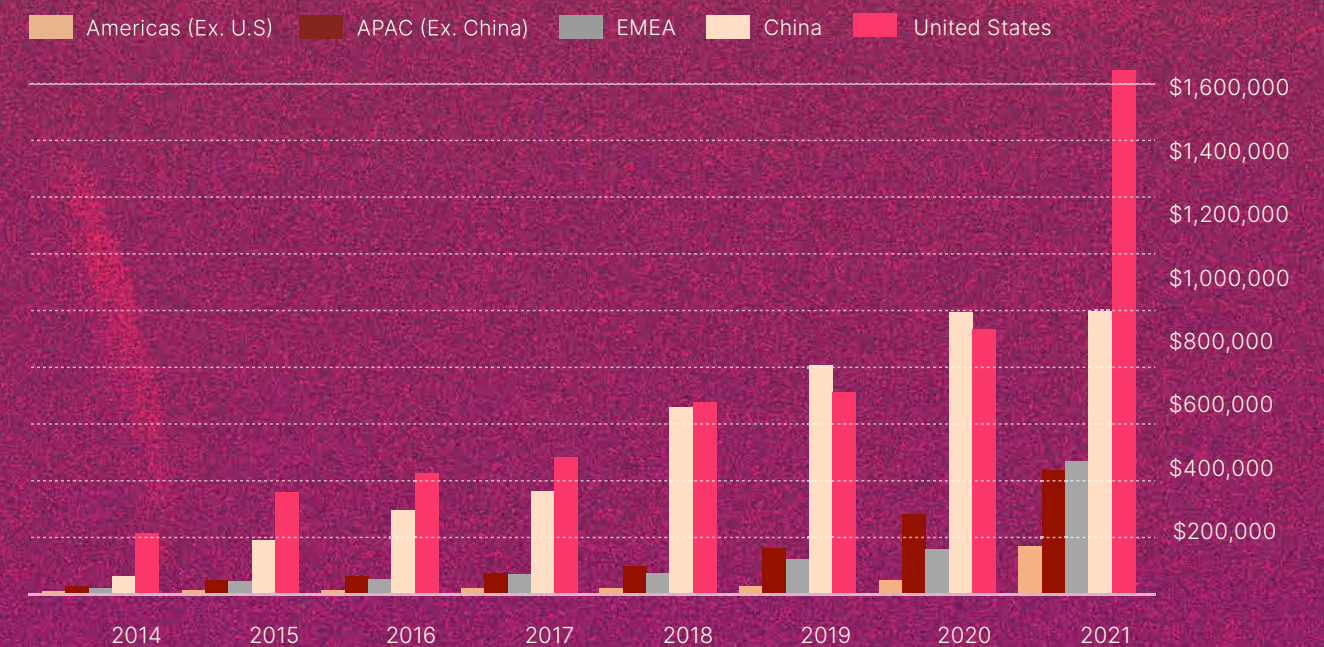
While early stage funding has increased in Austin, Miami, and other fledgling tech hubs outside of Silicon Valley – which may beget future changes to the geographic dispersion of U.S. unicorns – nearly all non-West Coast growth has been attributable to companies out of New York and Boston.

This shows no sign of abating: **of the 25 companies minted as unicorns between October 18th and November 1st, 36% were based in the Northeast, representing half of all U.S. new entrants.**

GLOBAL UNICORN MARKET SIZE BY YEAR

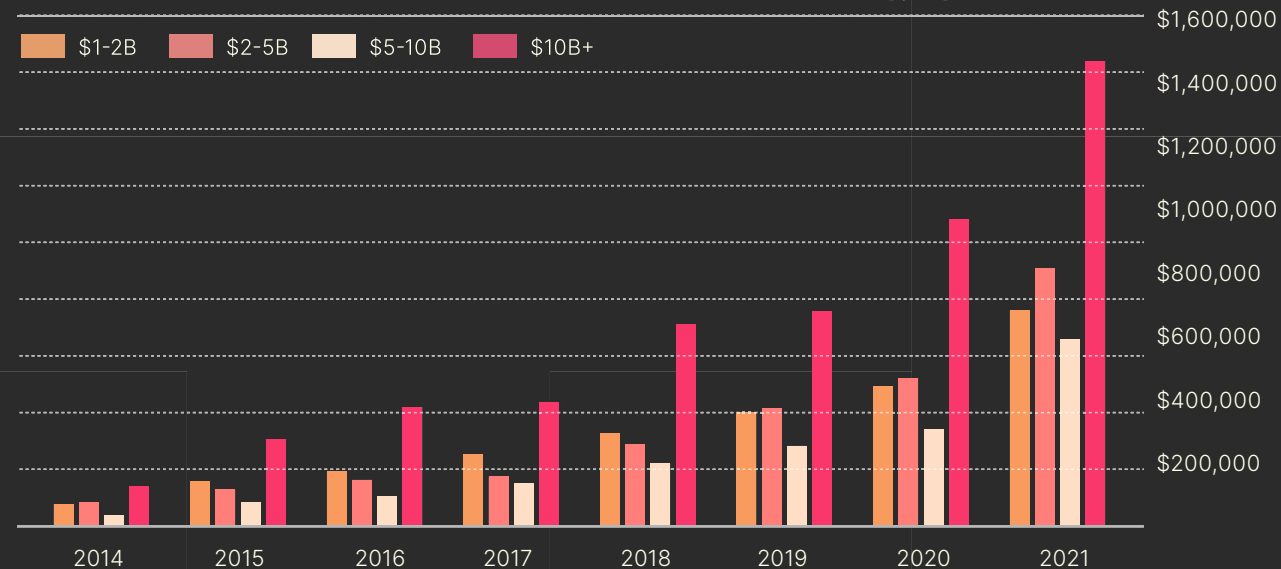


UNICORN MARKET CAP BY GEOGRAPHY (\$M)



Long Tail of the Unicorn

GLOBAL UNICORN MARKET CAP BY VALUATION RANGE (\$M)



While markets such as the US and EMEA (see: Unicorn Diaspora) have had strong rosters of \$1-5B companies each year – with cumulative values that match or exceed that of decacorns – the global distribution of unicorns is consistently skewed toward its winners, the best of whom stay private an extra two years on average¹.

As a result, incumbent year-over-year value add has steadily kept pace with that of all new entrants, representing 48% of value added between 2020 and October 18th, 2021.

This weighting toward the largest incumbents takes place as – for the first time since 2015 – the count of new entrants is set to overtake that of incumbents.

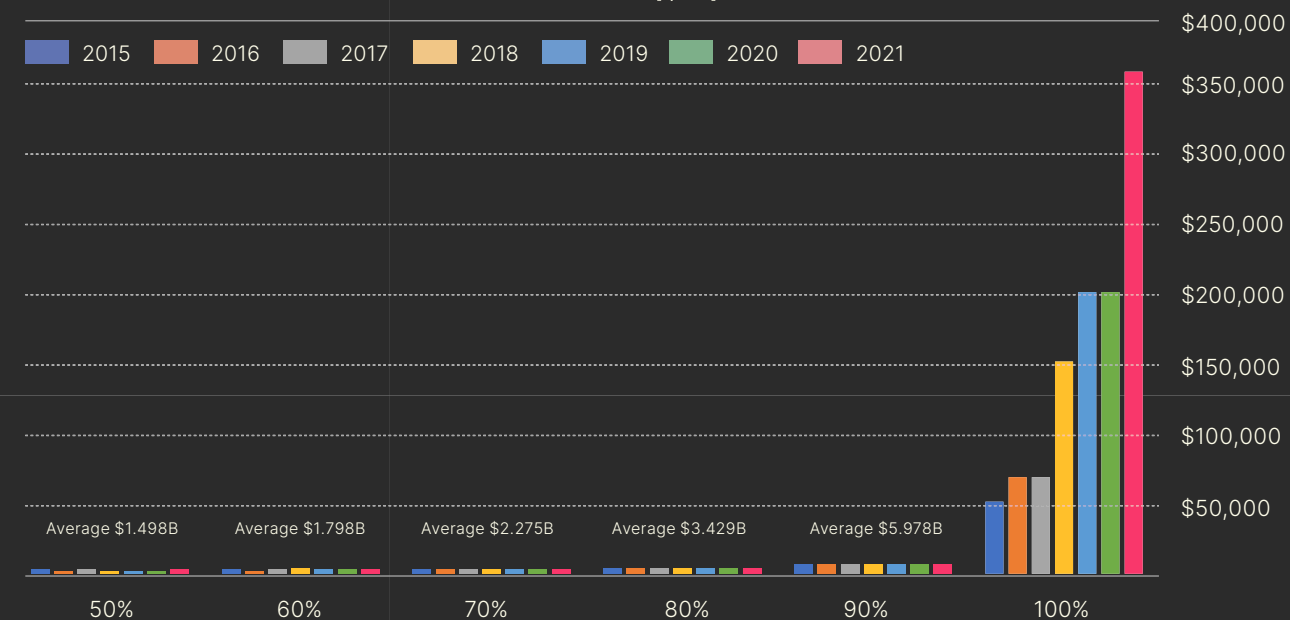
In 2021, new unicorns represented 49% of count and 26% of value, compared to 33% and 18% on average from 2016-2020, respectively.

While previous new entrants have historically consisted almost entirely of \$1-5B companies, factors such as the growing share of wundercorns, availability of secondary liquidity at heightened valuations, and reduced time between rounds for high-growth companies have resulted in 22 new unicorns at \$5B+ valuations this year (versus 7 in 2020 and 5 in 2019).

Notable companies in this group include: Kraken, Dapper Labs, Bolt Financial, and Wiz

¹ See our deep dive titled “Rapid Growth, False Narratives” later in the report for further detail on this concentration of value.

ANNUAL UNICORN VALUATION DECILES (\$M)



While the scale and growth of these new entrants bodes well for the future, it bears repeating that the most striking aspect of the global market for unicorn businesses is its skewness, as the very largest companies (the top 10 by market cap each year) are bigger than ever and, unlike all other unicorns, are staying private longer than ever before.

While the nature of this development and discussion of its implications are reviewed later in this report, the following analysis serves as an initial introduction to this dynamic.

As their share has declined from ~40% of the market from 2015-2018, the top ten largest unicorns continue to represent a disproportionate segment of what is now a ~1,000 company market.

This group, less than a percent of all unicorn companies today, accounts for over 25% of the total market capitalization at a collective sum of \$909B.

Even among this group of ten, there is a clear disequilibrium: the largest company, ByteDance (\$360B), is roughly 11 times larger than the world’s tenth-largest unicorn, Revolut (\$33B).

In the following sections of the inaugural Unicorn Report, we review three areas of inquiry for the inquisitive investor: the emergence and growth of unicorn businesses outside of the U.S. and China, the hidden truth to the otherwise false “staying private longer” narrative, and ongoing market developments in China that have produced stagnation in what was recently the world’s largest unicorn economy.

The Unicorn Diaspora

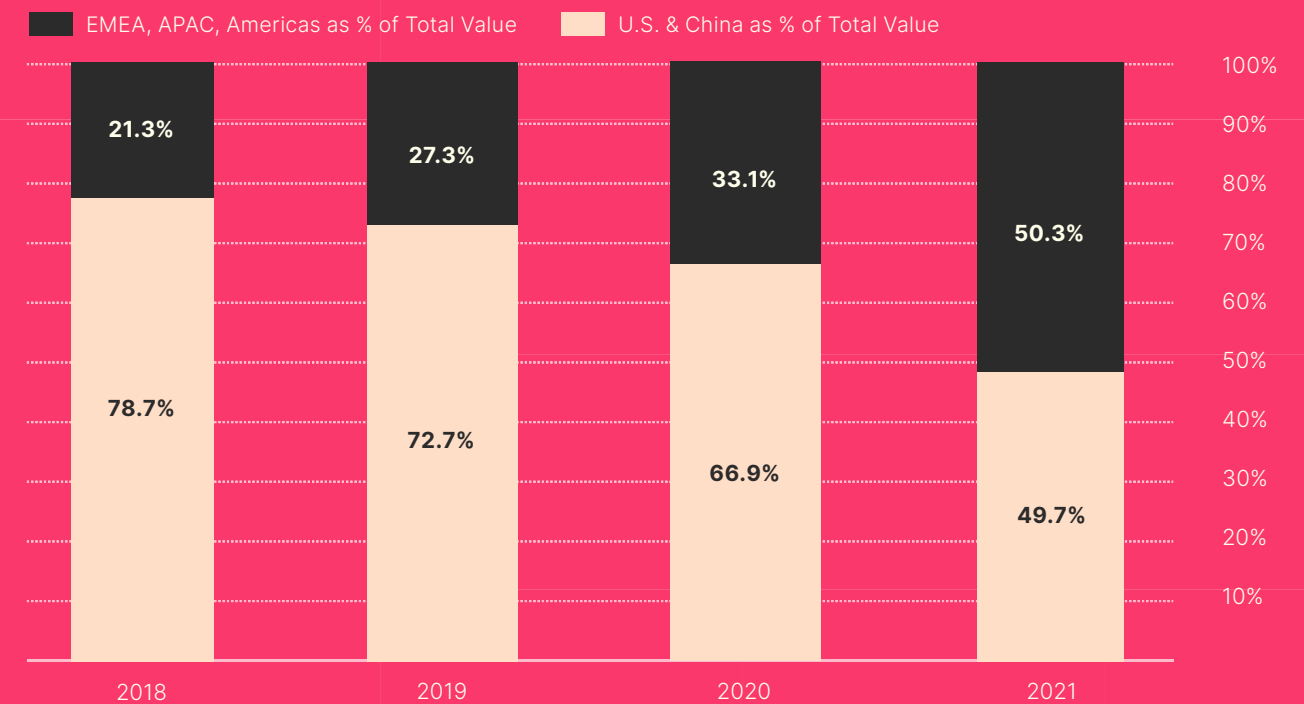




While the U.S. continues to represent the largest driver of unicorn growth by market, China's stagnation and previously unseen levels of growth elsewhere have together propelled non-core geographies ahead of the two core markets, from 21% market share in 2018 to over 50% of the unicorn market today.

It's not all catch-up either – global leaders offering new business models in payments, banking, and ecommerce have emerged out of non-core markets over the past half decade.

Global Unicorn Value by Region



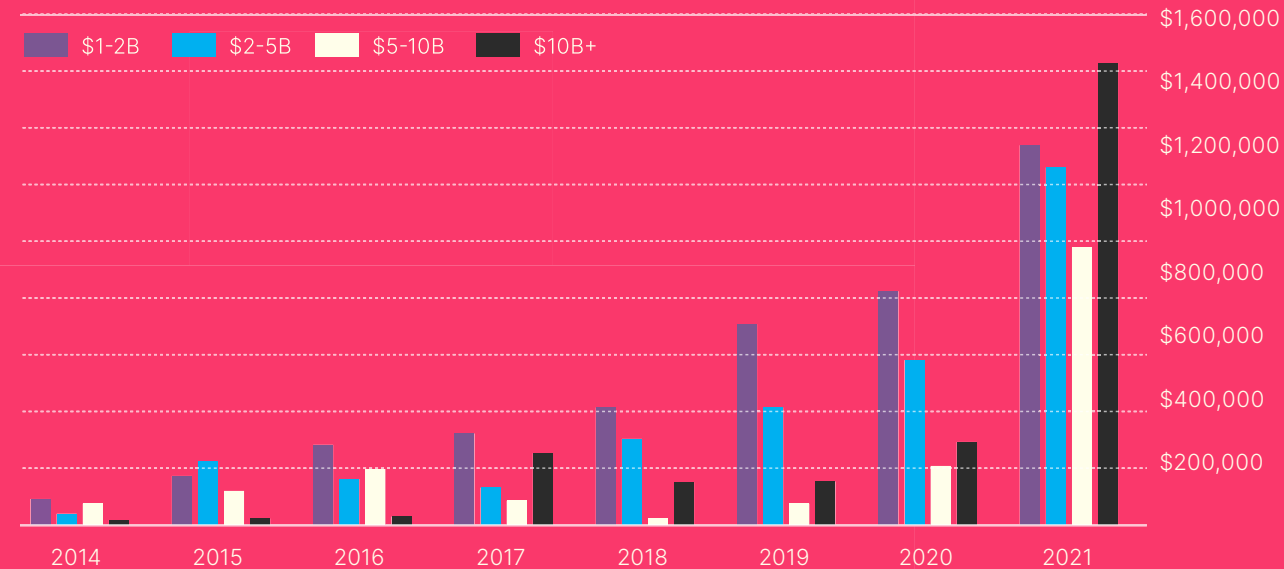
The Unicorn Diaspora – which refers to the accelerated growth of unicorn businesses in markets **outside of the United States and China** – has yielded consistently positive outcomes, though each market has taken a different path to scale, varying on the basis of leading countries, sectors, company classes, and types of growth.

Europe, Middle East, Africa

EMEA

UNICORNS	131
MARKET CAP	\$406B
ANNUAL GROWTH 2018-2021 CAGR	83%

EMEA MARKET CAP BY COMPANY VALUATION RANGE (\$M)



Fintech Frenzy

Europe is in the midst of a fintech renaissance. Klarna (buy now, pay later) and Adyen (payment integrations) are now global leaders in payments, while Revolut, Zepz, and Wise are leaders in foreign exchange and money transfers. Three of the five are active unicorns.

Fintech companies account for 40% of EMEA's top 25 unicorns by market capitalization and 56% of that group's value. The same holds for the top 50*, as fintech companies represent 38% of unicorns by count and 51% by value.

Europe's position at the forefront of financial innovation shows no sign of abating as the area's high financial literacy, access to financial hubs such as London, Frankfurt, and Geneva, and open banking environment (induced by EU regulations such as PSD2 and GDPR) continue to foster a highly collaborative and globally competitive ecosystem.

The market is also well-positioned in emerging verticals such as crypto and retail investing, with representative unicorns including Blockchain.com, Sorare, Trade Republic, Lydia, and TradingView.

*Includes two non-EU fintech companies: OPay and Pagaya

Talent Pipeline

EMEA has maintained a deep bench of early unicorns since 2014, with smaller, \$1-2B companies representing 35-50% of its market capitalization through 2020, compared to 15-20% elsewhere. This figure now stands at 25% as the market's two leaders, Klarna and Revolut, have grown and opted to stay private longer – an increasingly common decision among the world's largest unicorns (see: "Skewness and Size in Staying Private").

Nonetheless, the key to EMEA's stellar growth has yet to change: it continues to churn out sub-\$5B unicorns at an unparalleled rate, with over 90% of its value concentrated in Europe. Leading prospects for decacorn status in the coming year include Getir, an "ultrafast" delivery business; wundercorns* Hopin, Gorillas, and Sorare; and fintech companies Mollie, N26, and Trade Republic.

What to Watch

E-MEA

As Europe has become a top market for unicorns, the rest of EMEA – the Middle East and Africa – has yet to produce a global winner. Meanwhile, US-based unicorns Andela (remote talent), Chipper Cash (P2P payments), and Flutterwave (payments processing) have captured value from abroad in Africa. EU players such as Revolut and Zepz (operator of transfer service Wave) have also looked to both markets as key areas of adjacent growth.

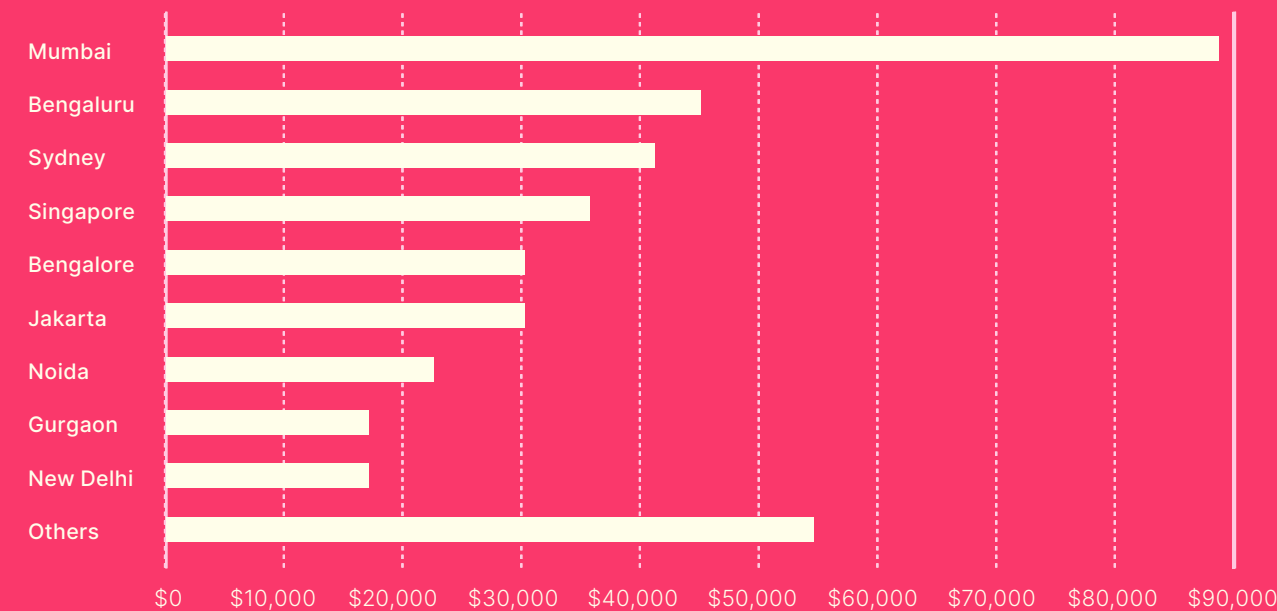
When Israeli wundercorn Wiz raised at a \$6B valuation this October, it represented the first-ever private valuation in excess of \$4B in either market. Will others follow?

Can OPay (Nigerian payments), Pagaya (Israeli lending firm with listing plans), and others replicate the success of Latin American and European fintechs in scaling from local to global winners?

*Wundercorn refers to companies achieving unicorn status within three years of founding. See "The Rise of the Wundercorn" for further detail

Asia-Pacific

APAC UNICORN MARKET CAP BY CITY (\$M)



India & Hub Cities Dominate

India has consistently represented 50-60% of APAC's total unicorn market capitalization, with the majority of non-India value concentrated in the same 3 cities each year: Singapore, Jakarta, and Seoul. These three have since become four: Sydney has joined ranks with Canva ramping its valuation up from \$6B to over \$40B in the past year. **For each year 2014-2021, the top 10 cities in APAC have represented over 85% of total APAC unicorn value.**

APAC

UNICORNS	99
MARKET CAP	\$397B
ANNUAL GROWTH 2018-2021 CAGR	67%

Mega-Markets

With the notable exceptions of Canva and BYJU's, the largest APAC unicorns often follow the same time-tested model: start as retail offerings or marketplaces and scale through vertical integration to become super apps. In turn, APAC has had the highest non-China concentration of value in incumbent unicorns, representing 75-85% of market value each year from 2015 to 2019.

This dynamic is now changing as pure-play unicorns focused on gaming (e.g. Dream11, Sky Mavis), fintech (e.g. toss, Airwallex, Digit Insurance, Moonpay), and other industries continue to emerge.

What to Watch

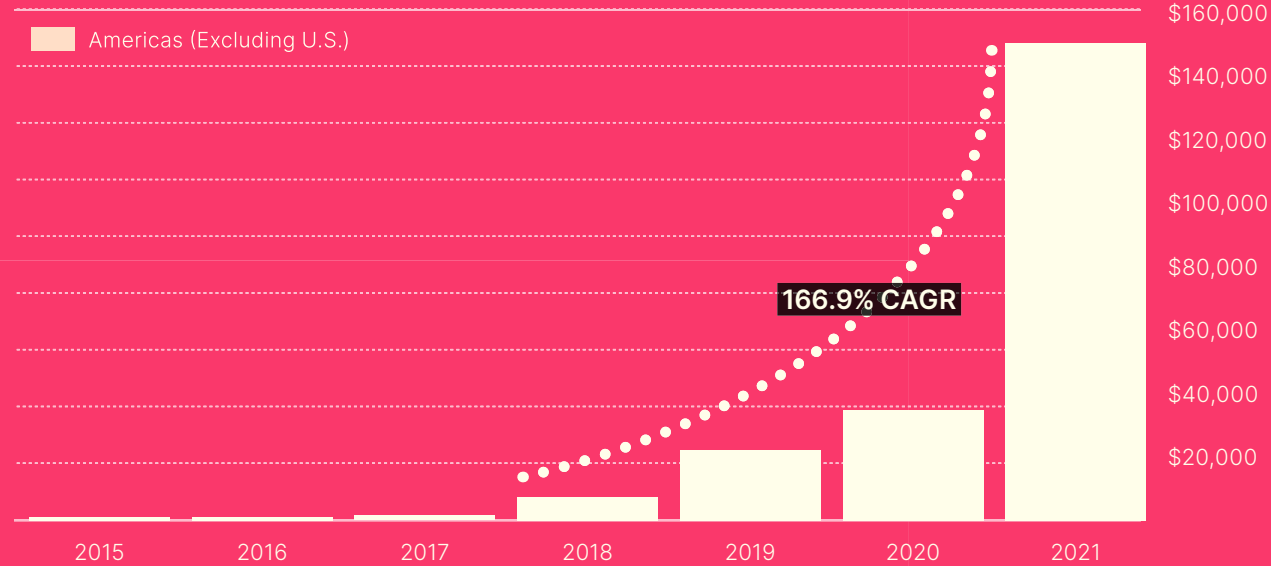
Rise of the Rest?

As Chinese unicorn growth has tapered off, digital adoption in India and Southeast Asia has taken off. Consequently, some have posited that the most effective alternative to investing in China can be found a hop, skip, and a jump away among its neighbors.

To date, China-focused late-stage investors do not appear to be reallocating investment to other APAC countries, though further restrictions akin to those placed on variable interest entities and increased early-stage funding for companies in other Asian markets may ultimately encourage such behavior.

Americas

UNICORN MARKET CAP BY GEOGRAPHY (\$M)



From Nothing, Something

From 2014-17, the Americas comprised only two unicorns – Shopify and Hootsuite – both of which were Canada-based. 2018 brought three others: Nubank, Rappi, and Afiniti.

Today, Shopify is a \$180B+ ecommerce behemoth that has inspired a host of local winners, most notably Brazil's Nuvemshop, while Nubank (plans for IPO at a \$50B valuation), Rappi (\$5B), and others in Latin America have transformed a set of fledgling Global South markets into a hotbed for unicorn activity.

AMERICAS

UNICORNS	40
MARKET CAP	\$149B
ANNUAL GROWTH 2018-2021 CAGR	167%

A Tale of Twos

Growth in the Americas' growth over the past three years has been dual-faceted with respect to both leading countries and company composition. For the former, two countries, Brazil and Canada, have represented 70% of the market each of the past three years – expect this to change with the IPO of Nubank, which alone accounts for over 20% of the market at its current \$30B valuation.

As for the latter, the Americas market includes defining elements of the two other Diaspora markets: like EMEA, it has a strong pipeline of \$1-5B companies; like APAC, it has seen far more value added by incumbents (e.g. Nubank, FTX, Kavak Mexico) than by new unicorns.

What to Watch

Local Winners

Digital adoption is begetting wholesale disruption in Latin America as markets historically plagued by inefficiency and bureaucracy now serve as breeding grounds for a new generation of local unicorns, particularly in the areas of ecommerce and fintech.

The prevailing success of Brazil's Nubank, Nuvemshop, and QuintoAndar over global incumbents in their respective lines of business shows that an offering tailored exclusively to the region can lead to a favorable outcome.

Look out for more local winners in countries such as Argentina and Mexico; payments and lending upstarts; and growth in non-fintech sectors such as edtech, legaltech, and mobility that are primed for digital disruption.

Market Leaders

Europe, Middle East, and Africa (EMEA)

Global Leader

No.	Company	Valuation	Country	Overview (15 words of less)
1.	Klarna	\$46B	Sweden	Buy now, pay later behemoth scaled rapidly during pandemic. Can momentum offset coming regulation?
2.	Revolut	\$33B	United Kingdom	EU fintech started with transfers and now turns to new markets and cross-selling. What sticks?
3.	Checkout	\$15B	United Kingdom	Transaction processor coasted up on ecommerce tailwinds, sees growth prospects in cards and crypto
4.	Northvolt	\$12B	Sweden	Bleeding-edge lithium battery producer looks to live up to potential as it builds out manufacturing
5.	Celonis	\$11B	Germany	Supply-chain optimizer is fresh face to SAP's furrowed brow. Demand is clear... can it execute?
6.	OutSystems	\$10B	Portugal	Low-code is growth play for PE firms plowing into company, which has avoided replicating Docker's dive
7.	N26	\$9B	Germany	EU's fintech awakening floats all boats, payments and neobanks alike. Departures from US/UK a setback
8.	THG Ingenuity	\$8B	United Kingdom	Spin-off from parent company can't come soon enough for this growing one-stop-shop for D2C brands
9.	Hopin	\$8B	United Kingdom	Zoom for online events is fastest wundercorn on record – watch out, this can scale quickly
10.	Getir	\$8B	Turkey	Ultrafast kingpin moves fast and is breaking EU groceries. How does it fare in U.S.?

Asia-Pacific (APAC)

No.	Company	Valuation	Country	Overview (15 words of less)
1.	Reliance Retail	\$63B	India	None have gained more from India's retail revolution. Dominates locale, spans verticals, and still hungry
2.	Canva	\$40B	Australia	Consumer design leader puts recent influx of capital to work with global enterprise expansion
3.	BYJU'S	\$20B	India	Beneficiary of China's edtech crackdown. Has it done its homework ahead of U.S. expansion?
4.	Paytm	\$17B	India	Forthcoming listing planned for latest and greatest Indian superapp; differs from others in fintech roots
5.	Grab	\$15B	Singapore	Southeast Asian superapp continues to roll out offerings, though must fend off heightened local competition
6.	Gojek	\$13B	Indonesia	Combined entity following Tokopedia merger eyes \$30-40B exit soon. Can the two cross-pollinate without friction?
7.	OYO Rooms	\$10B	India	Softbank-backed hotel chain tossed and turned during pandemic. Is it headed for contentious public exit?
8.	Swiggy	\$10B	India	Like DoorDash, has picked up on dirty delivery secret: the second mouse gets the cheese
9.	Dream Sports	\$8B	India	Stepped up to plate as top fantasy sports option, though proximity to betting taboo lingers
10.	J&T Express	\$8B	Indonesia	Courier service joins other APAC leaders in rush to public markets. Is tech appetite there?

Market Leaders

Americas

No.	Company	Valuation	Country	Overview (15 words or less)
1.	Nubank	\$30B	Brazil	LatAm neobank targets IPO at \$50B, setting precedent for others in budding market
2.	FTX	\$18B	Antigua	Crypto wundercorn with pile of cash, ready to replicate Coinbase's proven model of acquisition-driven platform growth
3.	Kavak México	\$9B	Mexico	Used cars are hot, car marketplaces are hotter. More white space than UK peer Cazoo
4.	Dapper Labs	\$8B	Canada	NFT gaming trailblazer produced TopShot and CryptoKitties; can it expand Flow and base of community-centered projects?
5.	Faire	\$7B	Canada	Wholesale marketplace is next great Canadian SME service provider; like Shopify, hasn't been stopped abroad
6.	Rappi	\$5B	Colombia	Columbian superapp scaled rapidly, rolling out offerings without sacrificing margins. Will end-to-end push pay off?
7.	QuintoAndar	\$5B	Brazil	Broker-free rentals bundler keeps bundling. Expanding to Mexico with bundle of cash from recent round
8.	C6 Bank	\$5B	Brazil	In home of bossa, JPM-backed neobank joins Nubank in riding wave of challenger bank adoption
9.	SSENSE	\$4B	Canada	Can Canadian luxury fashion retailer, Zara, and others hold off the 800-pound-gorilla that is Shein?
10.	Wealthsimple	\$4B	Canada	"Get rich slow" robo 3x'd over the pandemic, sees rich US peers with slowing growth





Rapid Growth
False Narratives?

The Narrative

Private companies (unicorns included) are staying private longer.

Much has been made of the observation that private companies are **“staying private longer,”** though the line has long since lost its empirical grounding.

Once an acute observation reflecting the exodus of companies from the public markets, the point is today contorted in every which way, a catch-all phrase used to lead into or offhandedly justify private market developments such as increased valuations, fundraising activity, and capital deployment.

“ Sell your cleverness and buy bewilderment ”

-RUMI

If tyranny is the deliberate removal of nuance, the arc of the “staying private longer” narrative closely resembles that of a famous Wellesian plotline – well-intentioned at first, dictatorial and insulated from the truth later on.

Early research on staying private longer (SPL) noted that from the late 1990s to 2015-2020, the number of U.S. listed companies halved, a phenomenon attributable to companies with valuations short of \$500M staying private longer.

Further research has shown that the median maturity at IPO of private U.S. businesses has increased 8 years over the same period.

Today, however, the line is hastily applied to considerations such as:

1. The private markets globally, not limited to the U.S.
2. The growth of the private markets based on company value, not count or maturity
3. The individual and aggregate growth of unicorn companies, neither of which is captured by this research

The Query

Are Unicorns actually staying private longer?

We find the last of the three particularly troubling, as the SPL narrative has been conflated with the growth of all unicorn businesses, yet its use is predicated on the growth of a few exceptional companies (e.g. Uber, Stripe, SpaceX, Airbnb) that capture the public’s imagination.

Are these companies representative of the unicorn market as a whole?

In the following analysis, we assess whether the line that private companies are “staying private longer” (SPL) holds for the private companies that matter most – unicorns.

We put this narrative to the test using the following three lines of inquiry, first looking to see if this observation held generally, then testing two alternative hypotheses.

Staying Private Longer

QUERY 1

Has the average maturity of unicorn businesses, inclusive of the time before a company is minted as a unicorn, changed a meaningful amount since 2014?

Staying Unicorn Longer & The Rise of the Wundercorn

QUERY 2

Once a company achieves unicorn status, is it staying private longer? If so, is this because companies now get to unicorn status sooner?

Skewness and Size in Staying Private

QUERY 3

If the preceding lines of inquiry are inconclusive, is SPL narrative-driven? Does it only hold for companies that capture the public’s attention (i.e. the largest unicorns)?

Staying Private Longer

QUERY 1

Has the average maturity of unicorn businesses, inclusive of the time before a company is minted as a unicorn, changed a meaningful amount since 2014?

If private companies are staying private longer and the average maturity of companies at IPO has increased markedly, it stands to reason that the observation should hold for venture and growth-backed unicorn businesses, those whose size and level of growth often occasion a listing.

Conversely, one could argue that such an observation is the product of observational bias: people only see what they want to see, and they fail to notice non-unicorn IPOs, which skew the average maturity of those listing.

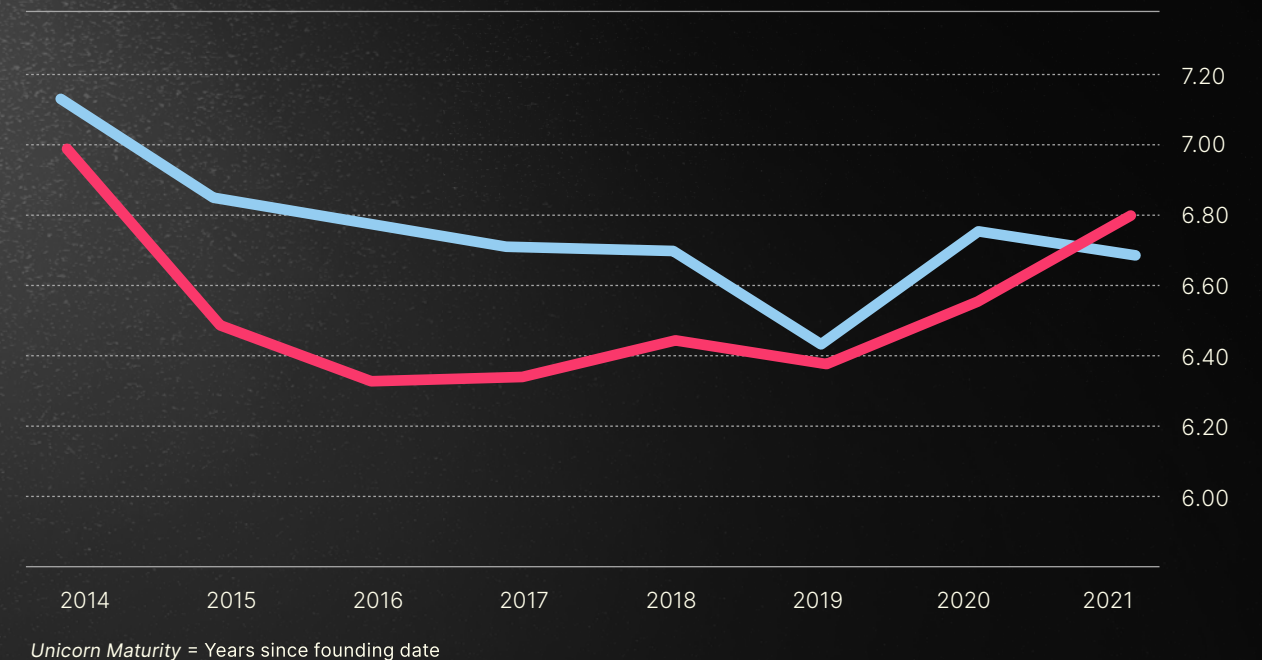
The latter, we find, is far closer to the truth.

While less instructive than the following two, this query provided a simple test as to whether the common association between SPL on the basis of IPO maturity and SPL on the basis of unicorn maturity is even directionally correct.

To test this query, we reviewed the time since founding for all known unicorn businesses within the venture and late-stage investment ecosystem from 2014 to 2021 (as of October 18th).

Seeing that SPL has historically been based on United States-only data, we then replicated the analysis for U.S. unicorns.

AVERAGE UNICORN MATURITY (YEARS) ■ UNITED STATES ■ NON-U.S.



We find that there has been limited change in the average maturity of unicorn companies since 2014.

While median maturity at IPO has been found to vary by a matter of years, average unicorn maturity has yet to vary more than a few months.

Median maturity has been seven years every year save 2020.

While moderately more mature, U.S. unicorns have exhibited minimal change in age as well; if anything, they are getting younger.

The remarkable consistency in unicorns staying private for seven years begs more questions than it answers, though it definitively answers the one question that matters. It is clear that unicorns are not staying private longer.

As their valuations have escalated at an impressive pace, the length of billion-plus-dollar companies' stay in the private markets has held steady.

Staying Unicorn Longer

QUERY 2

Once a company achieves unicorn status, is it staying private longer? If so, is this because companies now get to unicorn status sooner?

Seeing that the prevailing SPL narrative is insufficient in explaining the growth of unicorns as an asset class, we were forced to reevaluate, asking ourselves if there were other, more representative alternatives to SPL that could be tested concerning unicorn businesses.

The most compelling alternative, we concluded, was that these companies aren't staying private longer; instead, they are staying unicorn longer. Companies get to scale sooner, then choose to stay private at billion-plus-dollar valuations for an extended period.

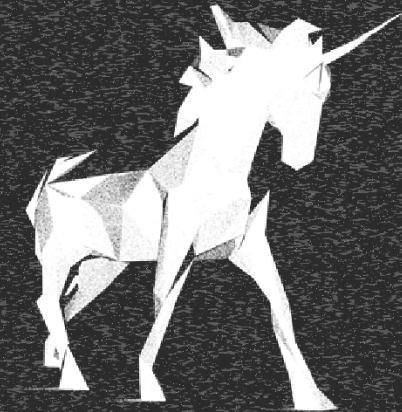
The first part of this observation (“getting to scale sooner”) refers to the availability of “force multipliers”: scalable products and services that free founders of burdensome duties.

When paired with the inherent virality and rapid growth of the consumer and enterprise technology markets, respectively, we hypothesized that the timeline to unicorn status has been accelerated. Companies like Pipe and Ramp, for example, have become unicorns within one or two years of being founded.

If this point held generally, it may be that some of the common justifications for SPL – namely the availability of private capital and the regulatory and compliance costs incurred at listing and on an ongoing basis in the public markets – have left newly-minted unicorns inclined to stay private longer.

To test this query, we bifurcated the data between companies that became unicorns in a given year (“new”) and those who were minted as unicorns at an earlier date (“incumbent”) to see if newly minted unicorns have gotten younger.

We also reasoned that the emergence of **WUNDERCORNs** **those achieving unicorn status in less than three years**, may not be statistically significant in the sample of 1,200+ unicorns minted between 2014 and 2021, though it may still hold true. As such, this analysis was performed separately in the following section.



Staying Unicorn Longer

QUERY 2

Once a company achieves unicorn status, is it staying private longer? If so, is this because companies now get to unicorn status sooner?

The first aspect of this query ran counter to expectations, as we found that new unicorns are, on average, more mature than incumbents.

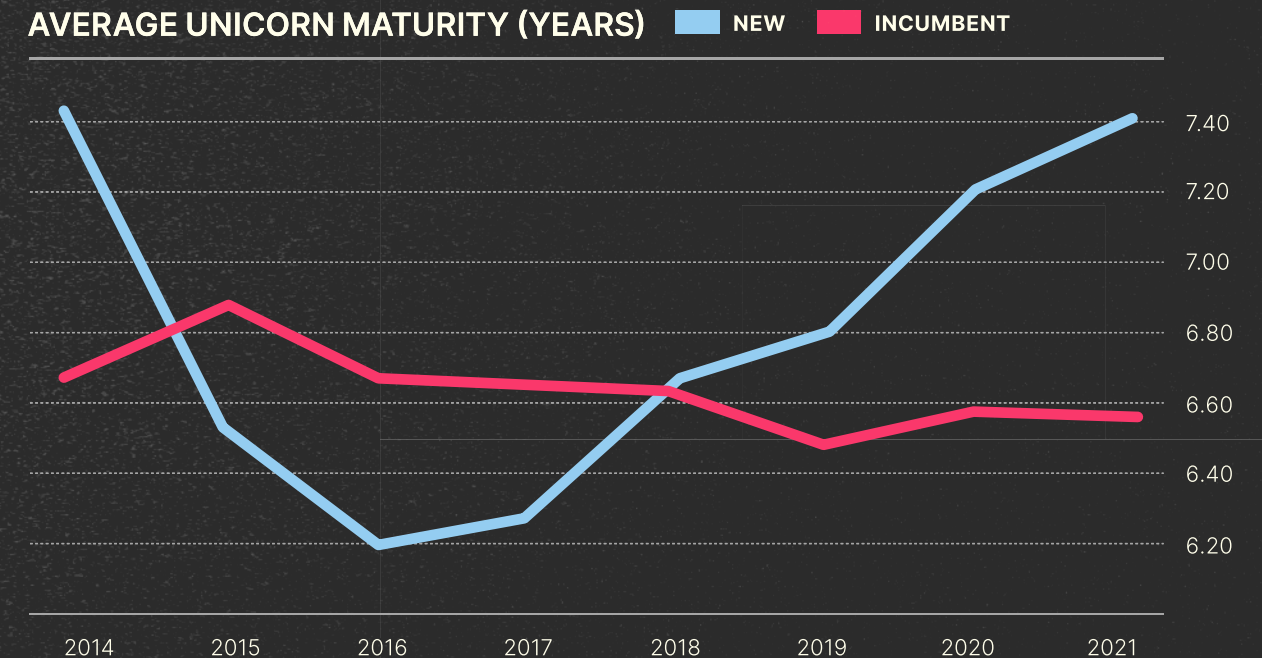
Possible explanations for this observation are that all years include new unicorns that are 10+ years old and raise a late-stage round before a liquidity event the following year – a practice that is increasingly common for mature enterprise software companies – and that 10+ year-old incumbents are more likely to experience listing and M&A activity than their younger counterparts.

The most feasible explanation, however, is that this is due to the Unicorn Diaspora: new unicorns in burgeoning markets such as EMEA and APAC (excluding China) have, on average, gotten three years older since 2017 while representing a growing share of all newly-minted unicorns.

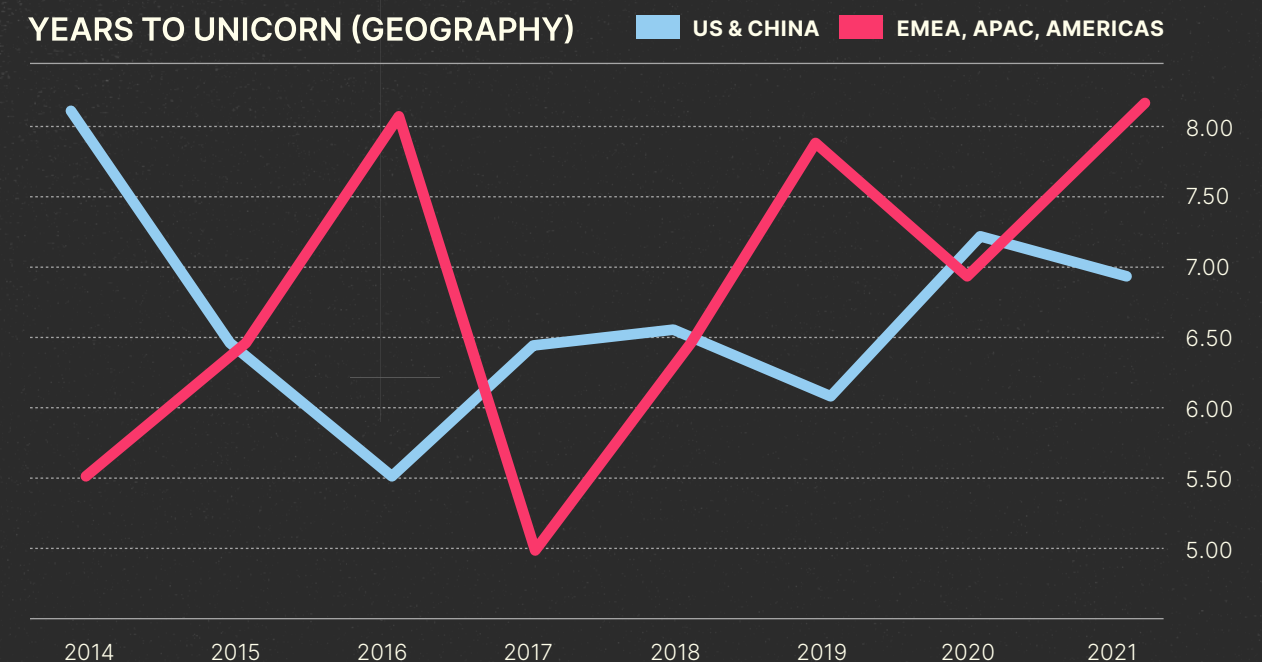
The data shows that companies now achieve unicorn status, on average, a year later than they did five years ago and in the same time as in 2014.

What seems to be an overnight success takes, on average, 2,500 days of tireless effort.

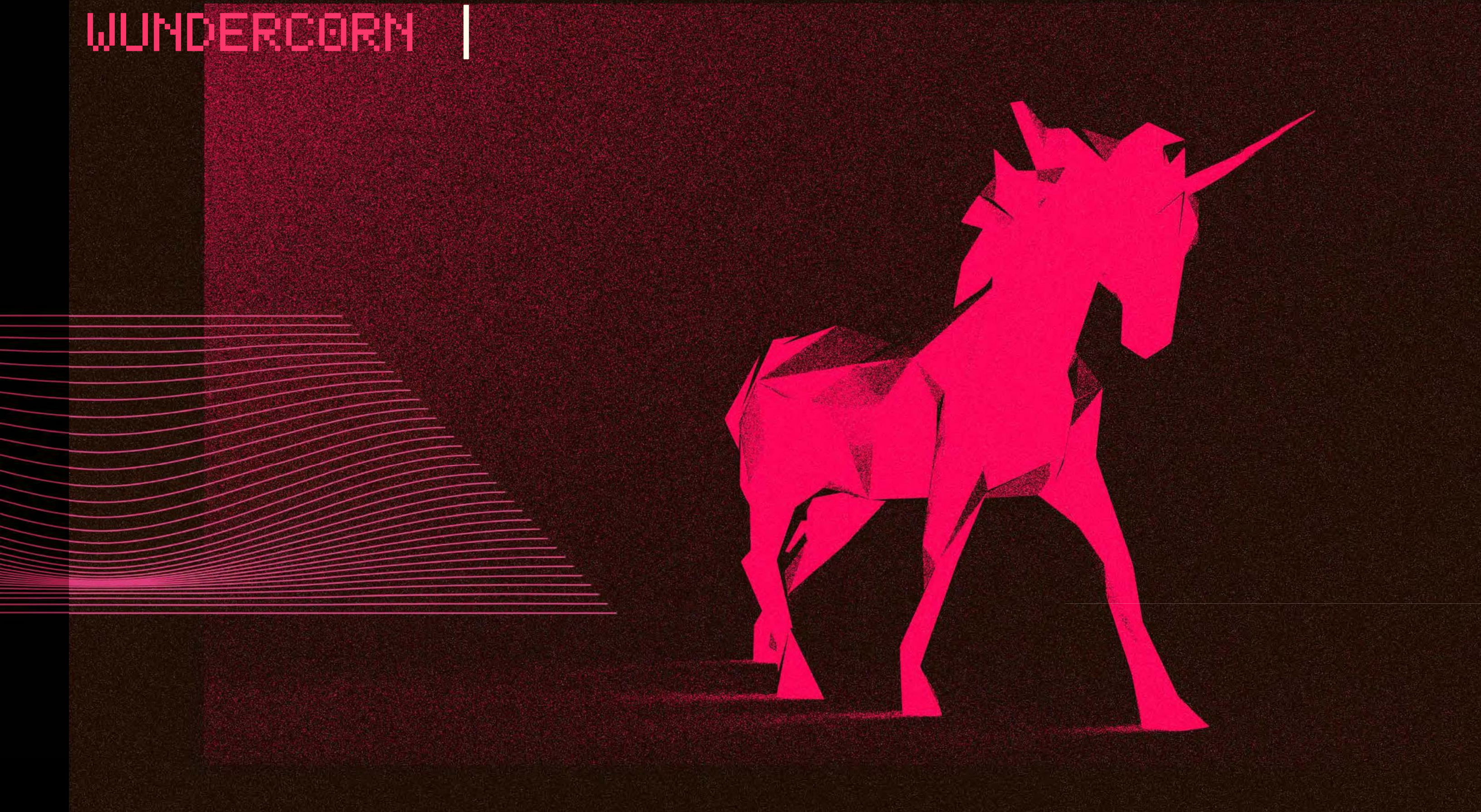
These first two tests show that unicorns are a) not staying private longer and b) not staying unicorn longer, though the continued growth of non-core unicorn markets is worth monitoring as it may affect both.



Unicorn Maturity = Years since founding date

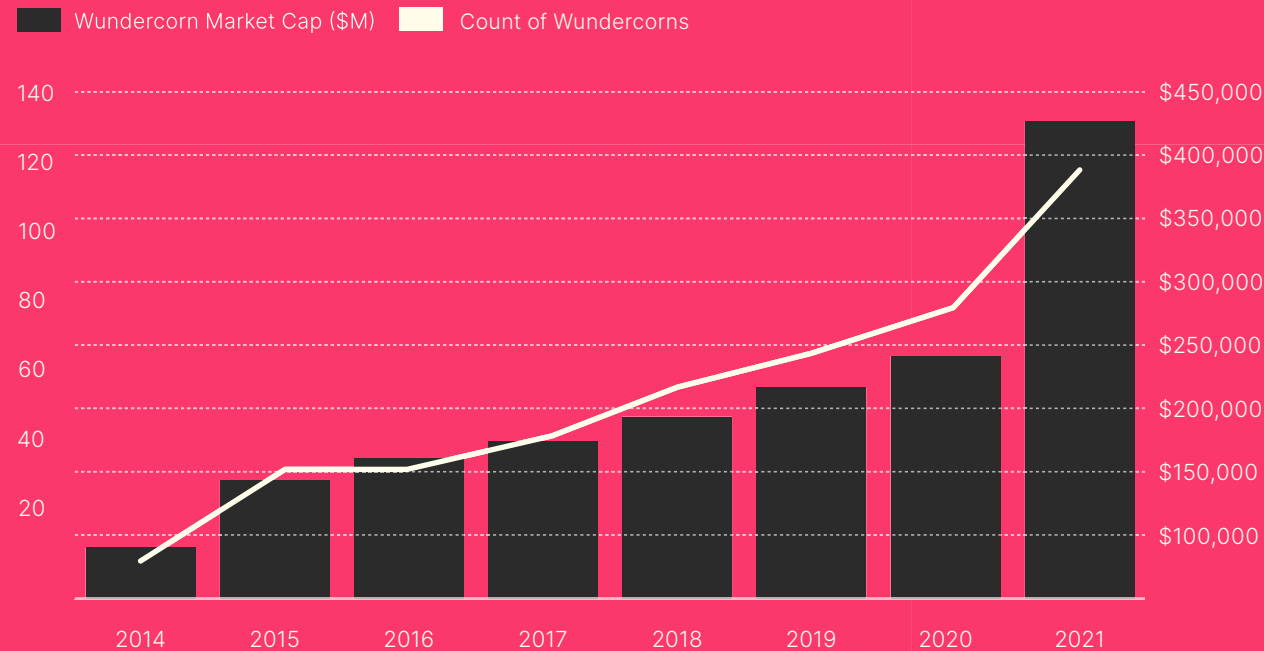


THE RISE OF THE WUNDERCORN |



THE RISE OF THE WUNDERCORN

WUNDERCORN MARKET SIZE BY YEAR



Wundercorn = Company achieving unicorn status within 3Y of founding date

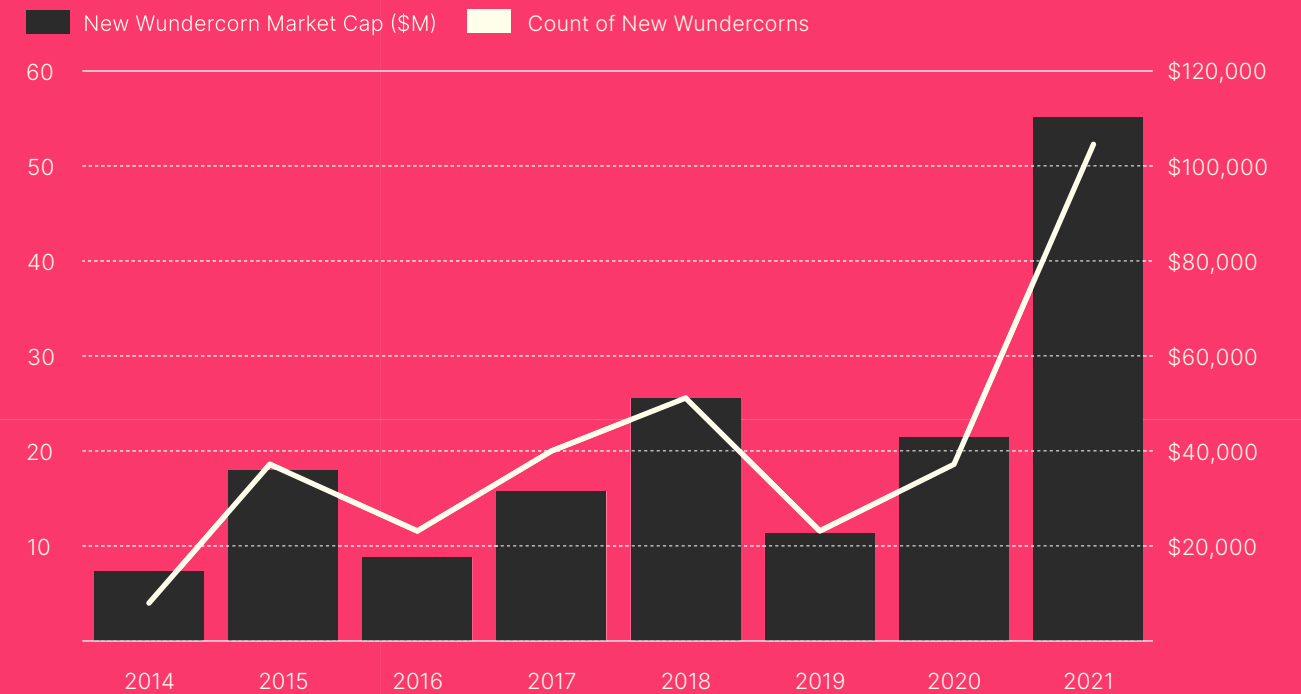
While, in aggregate, new unicorns have gotten older, we've also noticed that certain companies are achieving unicorn status in a matter of two to three years, a feat that was previously unthinkable, with increased frequency.

We have termed these companies achieving unicorn status within three years of founding "wundercorns" to reflect their prodigious growth and cachet as remarkably successful or popular businesses – many both, but cautionary tales abound concerning falls from financial grace (look no further than the *ride* and fall of various e-scooter and e-bike companies).

In 2018, electric scooter company Bird became the first non-spinoff company in the 2000s to achieve unicorn status within less than a year of founding, while this year Clubhouse, Pipe, Ramp, Melio, Pacaso, and 46 others were minted as unicorns within three years of their founding dates. 23 of these wundercorns achieved the feat in less than two years.

At the time of writing, another company – Sam Altman's Worldcoin, an a16z and Coinbase-backed startup exchanging retinal scans for cryptocurrency – joined wundercorn ranks, reaching unicorn status within two years of its founding date.

NEW WUNDERCORN MARKET SIZE BY YEAR



METHODOLOGY

To identify founding dates, we relied on publicly stated founding dates in news, company websites, or founder profiles; legal entity details in BvD; and news and insights collated using S&P Intelligence.

We then compared these dates to internal data on unicorn deal dates (i.e. the date a company is minted as a unicorn), noting companies that achieved unicorn status in less than 2 years or within 2-3 years.

Last, we consolidated the two and sized the market for newly-minted wundercorns each year from 2014 to 2021 using internal unicorn valuation data.

NOTABLE WUNDERCORN BY UNICORN YEAR

2021 Pipe, Clubhouse, Gorillas, Ramp

2020 FTX, Hopin, Thrasio

2019 Anduril, Hims & Hers, JD Health

2018 Brex, Bird, Lime, Luckin Coffee

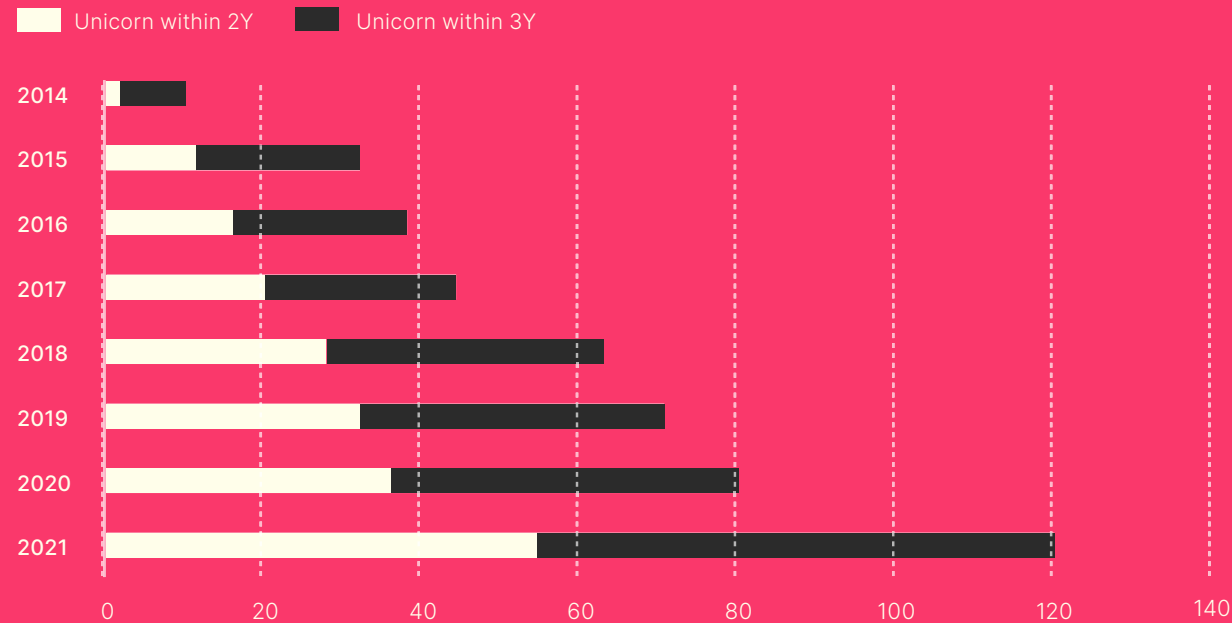
2017 GRAIL, Mobike, Nio

2016 Opendoor, Zoox

PRIOR Square, Xiaomi, Instacart, Snap, Airbnb

THE RISE OF THE WUNDERCORN

WUNDERCORN COUNT BY YEAR



Wundercorn = Company achieving unicorn status within 3Y of founding date

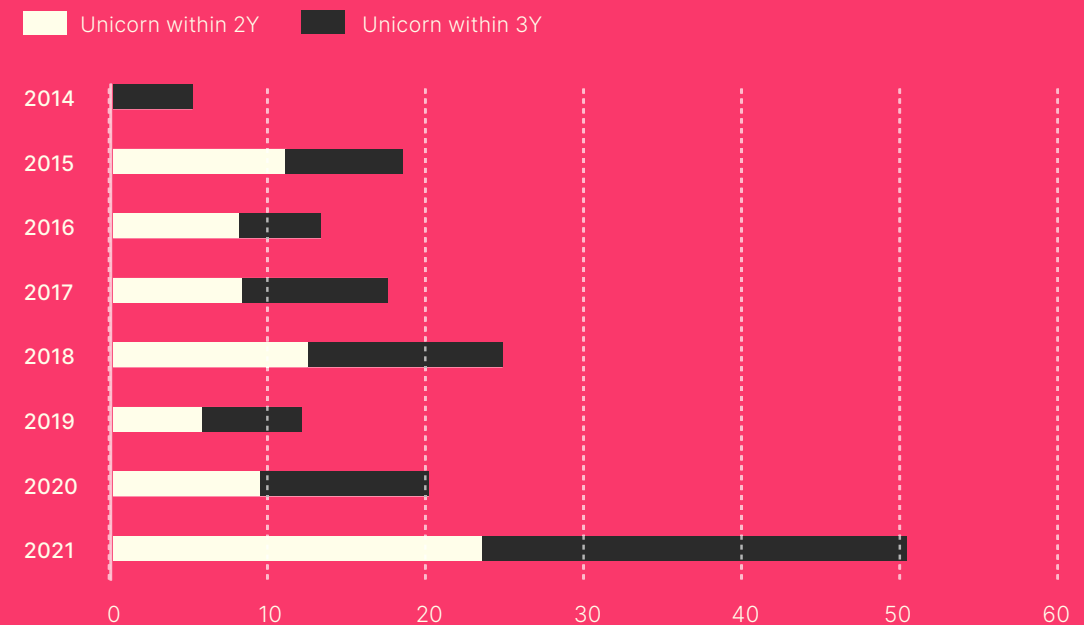
While still an admittedly small sum relative to the overall unicorn market (which stands at a princely sum of \$3.57T) and the market for 2021 new unicorns (\$910B), the emergence of new wundercorns as a \$109B asset class in less than a decade may prove to be a meaningful development in the technology ecosystem.

Once an aberration, new market dynamics and augmented company capabilities have served to make wundercorn status an achievable, though still highly improbable, outcome. Despite the group's exceptional growth, the 36 wundercorns minted in 2021 represented only 7.44% of all new unicorns as of October 18th.

In reviewing each year's wundercorn companies, we also noted that there seem to be two distinct paths to this status, both intuitive yet fundamentally different from one another.

The first path includes Pipe, Brex, Square, and Instacart – companies with unique value propositions that can scale rapidly – as well as Ramp and Gorillas – companies with viable alternatives to scalable and profitable business models. Among the former, Pipe first provided means of non-dilutive financing for software businesses, while Square and Brex provided better options for merchant payments and startup spend management, respectively.

NEW WUNDERCORN COUNT BY YEAR



Ramp and Gorillas, meanwhile, took existing models used by Brex and Instacart and modified what they stressed in the mix of services – spend management and fast delivery, respectively – at no additional cost. In short, all companies in this category are great businesses **servicing a real, demonstrable need**.

The second path bears stark resemblance to that of Icarus: companies that fly high through excessive funding and expansion, at risk of begetting their own downfall. For electric mobility companies Bird, Lime, and Mobike, and others such as Clubhouse, Altos Labs, and Worldcoin, wundercorn status is more the byproduct of a winner-take-all rush for monopolization or starry-eyed views of space than it is a true reflection of the company's success to date.

None of these companies have a clear path to profitability; instead, they hope to rapidly accumulate an audience by burning through VC dollars – it's not about the money, it's about getting to scale as fast as possible.

– it's not about the money, it's about getting to scale as fast as possible.

As capital continues to flood into the venture ecosystem and areas of investment such as DeFi, mobility, and biotechnology move from within and across sectors, we expect to see more of the latter category of wundercorns emerge, with many quickly returning to the ashes from which they were birthed.

We believe that this is mitigated, if not wholly offset, by the consummation of ambitious visions (see: GRAIL) and a similar increase in the former category of wundercorns, as the availability of time-saving software, bottom-up software adoption, reduced switching costs, and a variety of other tailwinds now make it possible for exceptional businesses to scale faster than ever.

Skewness and Size in Staying Private

QUERY 3

If the preceding lines of inquiry are inconclusive, is this narrative-driven? Does SPL only hold for companies that capture the public's attention (i.e. the largest unicorns)?

Some stories are too good not to be told, and few rival that of exorbitant sums of capital, previously unthinkable valuations, and exponential levels of growth deliberately kept outside of the purview of the public markets.

The extended private market staying power and pre-listing growth of marquee names such as Uber, ByteDance, Airbnb, and SpaceX is so intuitive, instructive, and compelling that it is now an accepted truth.

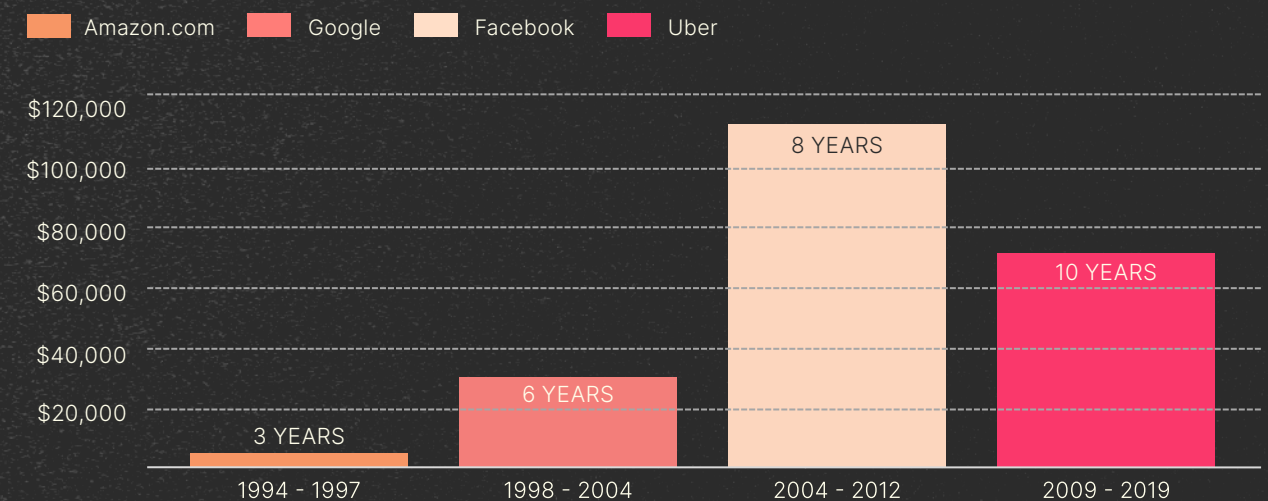
While the preceding analyses show that SPL does not hold for unicorns generally, perhaps there is some truth to the claim that the **very best** unicorns are staying private longer.

METHODOLOGY

In this final query, we initially performed two analyses in tandem, 1) identifying the top ten incumbent unicorns by valuation and all incumbent decacorns each year then 2) comparing the two to all other unicorns with respect to their time to unicorn status, time as unicorns, and year-over-year growth.

As we performed this analysis, we were forced to discard the second analysis, as there were only 14 decacorns 2014-2016, compared to 32 in 2020 and 48 in 2021, as of October 18th (50+ at time of writing). Data on incumbent decacorns, we noted, was more a reflection of the group's increasing count than of its composition.

TIME TO IPO AND MARKET CAPITALIZATION (\$M) AT IPO: AMAZON, GOOGLE, FACEBOOK, UBER



Our analysis of the top ten incumbents by year provided the first reliable indication of unicorns staying private longer. As elevated valuations have pushed top companies into decacorn range, the average top-ten unicorn is now staying private for, on average, an additional two years. This is in line with our initial expectations concerning companies staying unicorn longer: while the observation doesn't hold for the asset class as a whole, the most highly-valued unicorns are minted sooner than others and opted to stay unicorn longer.

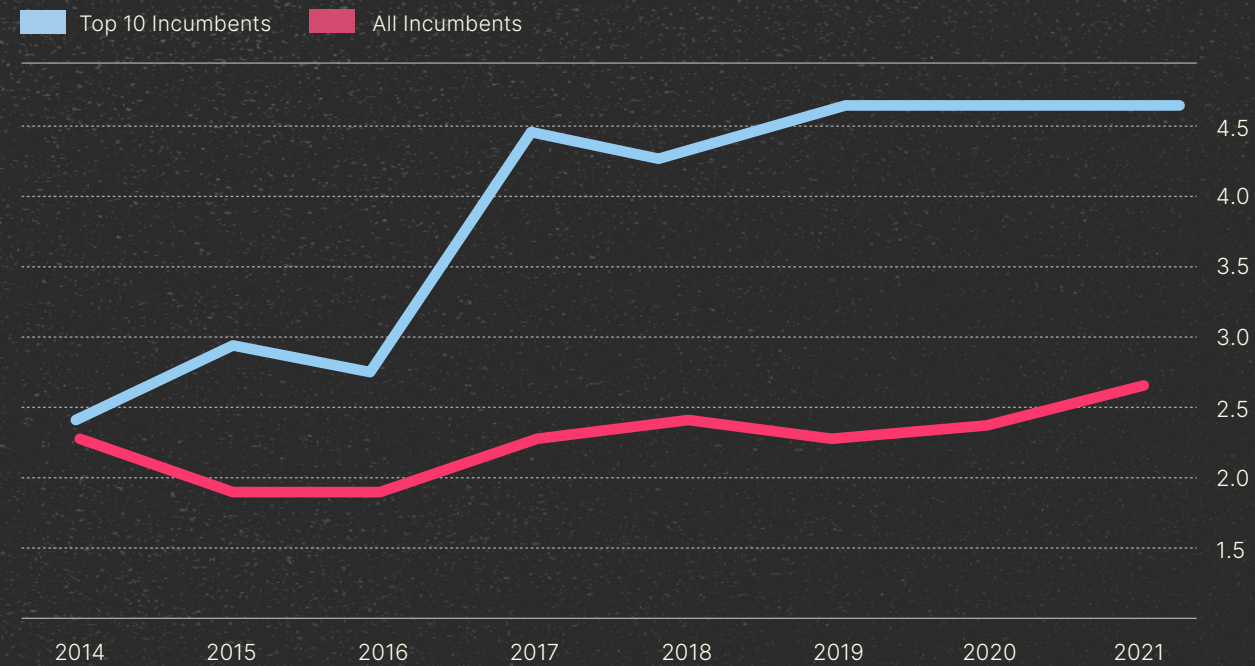
While two years may seem like a mere afterthought relative to the media's SPL sticker price of eight years, it is just as meaningful, if not more.

Despite the dramatic increase in the number of known unicorn companies since 2014 (90 in 2014 to ~500 in 2019 and ~1,000 in 2021), the top 10 companies in any given year continue to represent at least 25% of total market value.

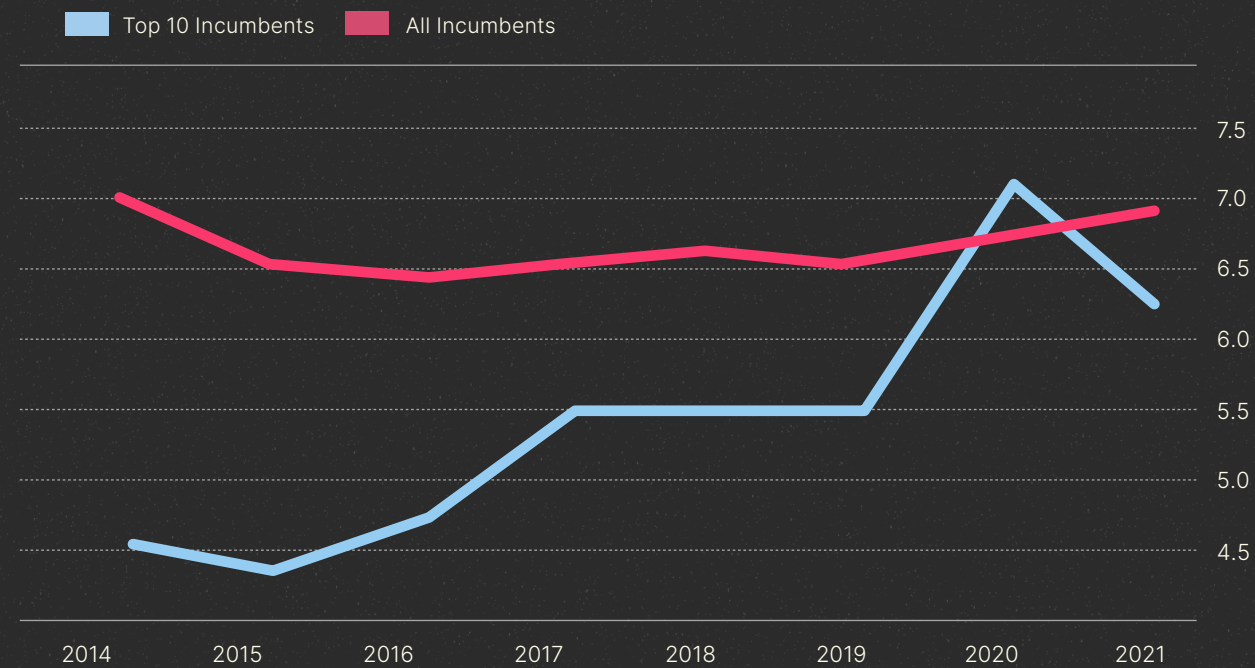
Given the skewness (here, top-heaviness) of the unicorn market, these ten companies staying private for an additional one or two years amounts to hundreds of billions, if not trillions, of dollars kept beyond the reach of everyday investors.

Chart Source: Morgan Stanley Investment Management

YEARS SINCE UNICORN STATUS - TOP 10 TO ALL INCUMBENTS



YEARS TO UNICORN - TOP 10 TO TOTAL



Years to Unicorn = Unicorn Year - Founding Year

INCUMBENT COMPANY	2020	2021	ADDED VALUE (\$M)	PERCENT CHANGE
ByteDance	\$180,000	\$360,000	\$180,000	100%
Stripe	\$36,000	\$152,000	\$116,000	322%
SpaceX	\$46,000	\$100,300	\$54,300	118%
Klarna	\$10,650	\$45,600	\$34,950	328%
Canva	\$5,910	\$40,000	\$34,090	577%
Instacart	\$17,700	\$39,000	\$21,300	120%
Databricks	\$6,200	\$38,000	\$31,800	513%
Revolut	\$5,184	\$33,000	\$27,816	537%
Nubank	\$10,000	\$30,000	\$20,000	200%
Epic Games	\$17,300	\$28,700	\$11,400	66%

\$531,656 **288%**

In this year alone, the top three largest incumbent unicorns - ByteDance, Stripe, and SpaceX - have, to date, accounted for over \$350B in added value, more than double the total value (\$159B) added by the top ten incumbents last year.

The top three incumbents in this one year alone added more value (\$350.3B) than the cumulative added value of all 323 incumbent unicorns between 2018 and 2019 (\$347.4B), within earshot of the cumulative added value (\$375B) of 411 incumbents 2019-2020.

This \$532B added in a single year by ten companies amounts to roughly the entire unicorn market capitalization for the year of 2019 (\$1.66T).

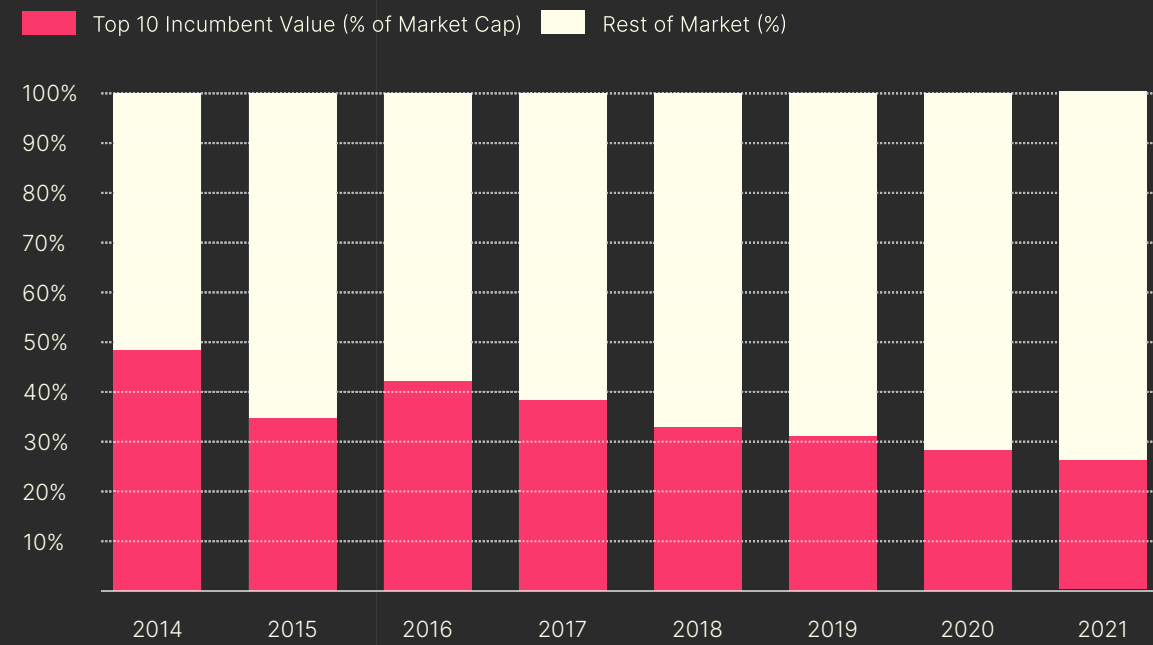
The top ten movers in 2020-2021 added more value in a year than either grouping – all new unicorns or all incumbent unicorns – added in any preceding period.

Furthermore, of the top five unicorns by market, only one (Klarna) has indicated plans to go public in 2021. ByteDance has noted a potential delay as it adapts to changes in national tech policy, while leaders at both Stripe and SpaceX have indicated that they are in no rush to go public.

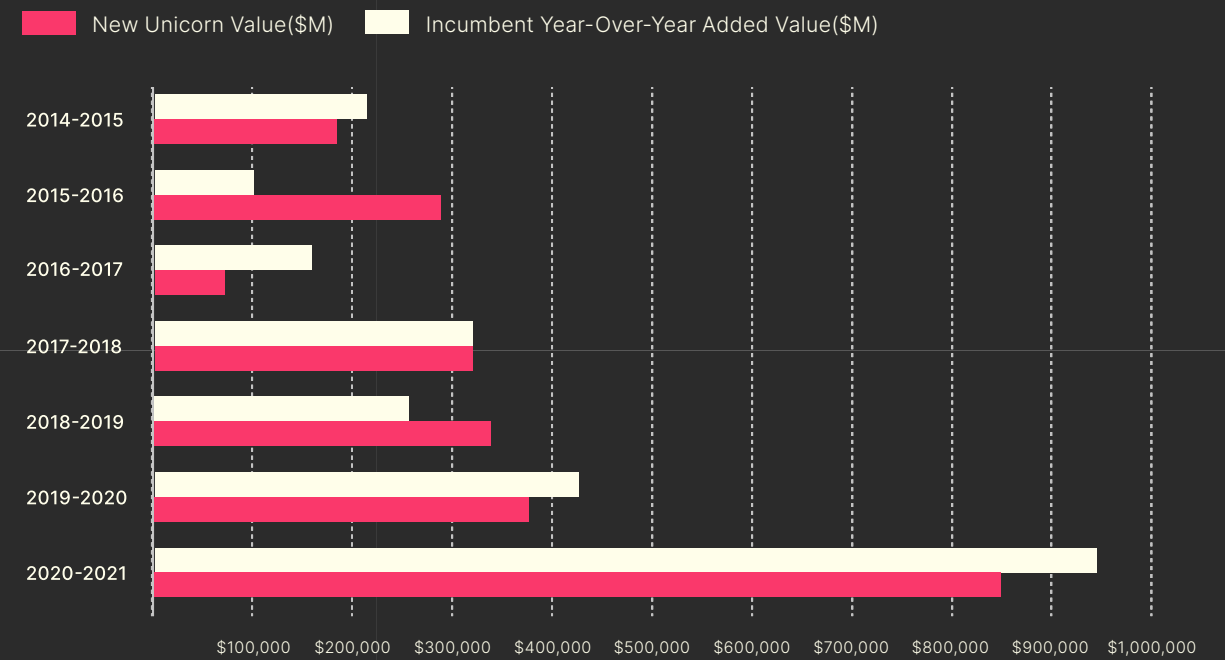
Everyday investors, meanwhile, are systematically excluded from capturing the growth ascribed to Stripe’s EU expansion and SpaceX’s continued progress in building out its fully-reusable Starship.

Even if unicorns are not staying private or unicorn longer, the two prior observations are rendered moot should the very largest unicorns continue to stay private for an extra two years and, in that time, provide unprecedented value to accredited and institutional investors.

TOP 10 UNICORNS TO REST OF MARKET BY YEAR



CHANGE IN UNICORN MARKET CAP BY YEAR



The Verdict

Sinclair once noted that it's difficult to get a man to understand something when his salary depends on his not understanding it; in the same vein, the **“staying private longer”** narrative is readily accepted because few stand to gain from it being debunked.

Like the Dunning-Kruger Effect, also since shown to be false, the line is an efficient means to certain self-serving ends, a reference point that people want to believe because, to validate a given contention, they need to believe it; hence, they see no reason to question it.

We noted earlier that the truth is never simple and rarely pure – Brandolini's Law and the narrative fallacy simply lead to it appearing to be so. If there is any truth to unicorns staying private, the current basis for this claim is nonsubstantive.

For one, SPL is used as a short-run claim despite being based on a long-run observation that itself is cherry-picked to start with the Internet Bubble, one of the most exuberant moments in recent history.

Other cases of misuse abound.

Here, we focus on one in particular: that the SPL claim itself doesn't necessarily apply to unicorns, the largest companies in the private markets, but is treated as if it does.

The first section of this analysis shows that changes in the maturity of companies that list publicly are not commensurate with changes in the maturity of companies minted as unicorns, as the latter has not changed in seven years.

A change in verbiage to account for a more feasible alternative (staying unicorn longer) yielded a similarly dismissive outcome. The final analysis, compared to its predecessors, provides a real point of validation, but not without a few important nuances.

We find that the claim that there is an increasing amount of growth in marquee names – companies like Uber, Stripe, and ByteDance – concentrated in the private markets is directionally correct, though media publications, trade publications, experts, and companies alike make the mistake of ascribing this observation to the fact that all companies (or unicorns) are staying private longer. The two observations, the preceding analyses indicate, are not to be conflated.

In a recent speech, SEC Commissioner Allison Lee observed that “companies can and do stay private far longer than ever before, despite the fact that they often dwarf their public counterparts in size and influence,” representing one of the most acute assessments of private market company dynamics to date.

The issue at hand is not that

- a) companies can stay unicorn longer and
- b) choose to do so: the latter point is not a generalizable truth and both neglect the outsized impact of the largest players.

SPL is a red herring; the real issue at hand is the extended private market stays and extraordinary growth of the very best companies, those with scale that rivals or well exceeds that of their public market counterparts.

The most significant narrative of the past decade isn't that unicorn companies, like others, are staying private longer – they aren't.

Instead, the very largest unicorns are staying private longer, and, in that time, they are growing bigger than ever faster than ever before.

In a market that is consistently dominated by a select set of marquee names, the fact that these companies – unicorns among unicorns – are staying private longer lends credence to a claim that is otherwise patently false.

The Fable of the Chinese Dragon

CLIPPED Wings





It's a tough time to be rich and famous in China.

The country's richest man disappeared for three months earlier this year and resigned himself to philanthropic causes upon return, his \$200B company's plans for a public listing in shambles.

After decades of largely unfettered consumerism and widespread idolization of capitalistic excess, billionaires and celebrities are now punished by virtue of being, well, billionaires and celebrities.

China's most valuable technology companies, mired in a maze of red tape, face a similar conundrum. Network effects in winner-takes-all markets gave birth to Tencent, Alibaba, and a host of other internet giants who looked to those in the West as peers; as of late, Chinese tech titans have endured restrictions focused on breaking monopolies, limiting data centralization, and bringing an end to the market-driven "excess."

In turn, many of China's largest unicorns have lost their wings.

Across The Pacific

China by the Numbers

+15% ANNUAL GROWTH
2014-2021 CAGR

184 TOTAL UNICORNS
AS OF OCT 18 2021

\$918B MARKET GAP
AS OF OCT 18 2021

Across the Pacific, tech journalists in the U.S. have tried and failed to relabel decacorns "dragons" – a puzzling endeavor, as the former implies a natural evolution in value, while the latter only serves to make tech's mythological stable a far more dangerous place.

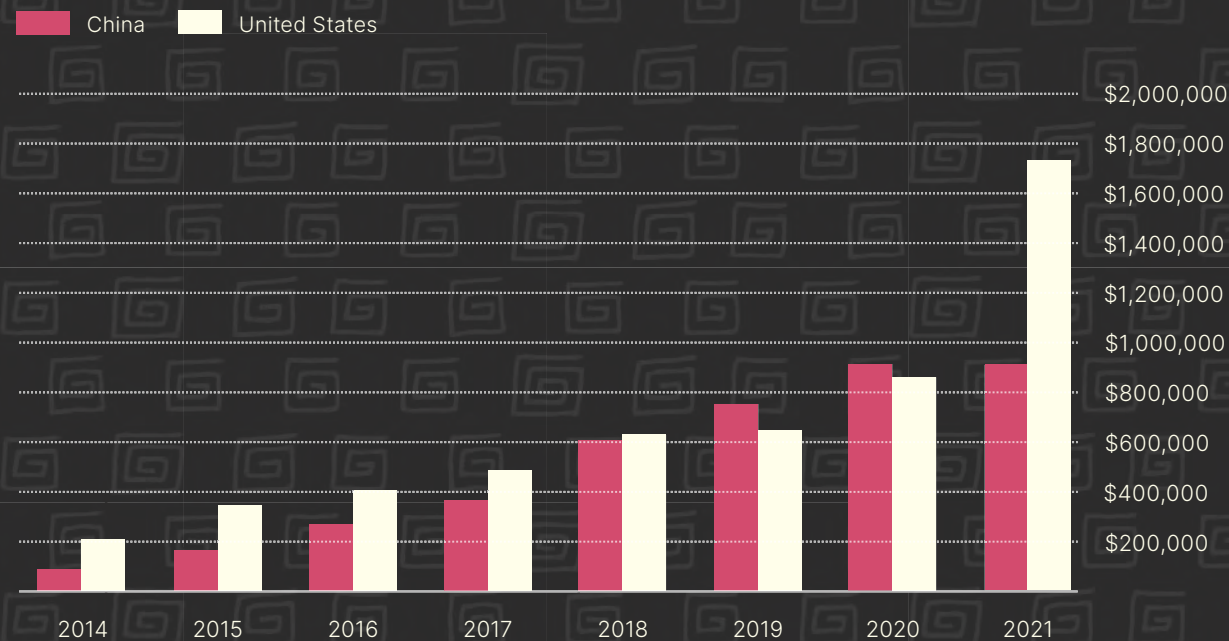
But it did get us thinking. What about situations where the size and attention brought by such a valuation is not all positive and instead poses a risk to a business?

We define "Dragons" as China-based decacorns. Private businesses with \$10B+ valuations.

Why? Because Chinese dragons, unlike their Western counterparts, do not have wings. These businesses' valuations endow them with a certain level of mythological significance, but, operating in a market in which the growth of large technology companies is deliberately inhibited, they must make do with clipped wings at home.

Market Overview

UNICORN MARKET CAP BY GEOGRAPHY (\$M)



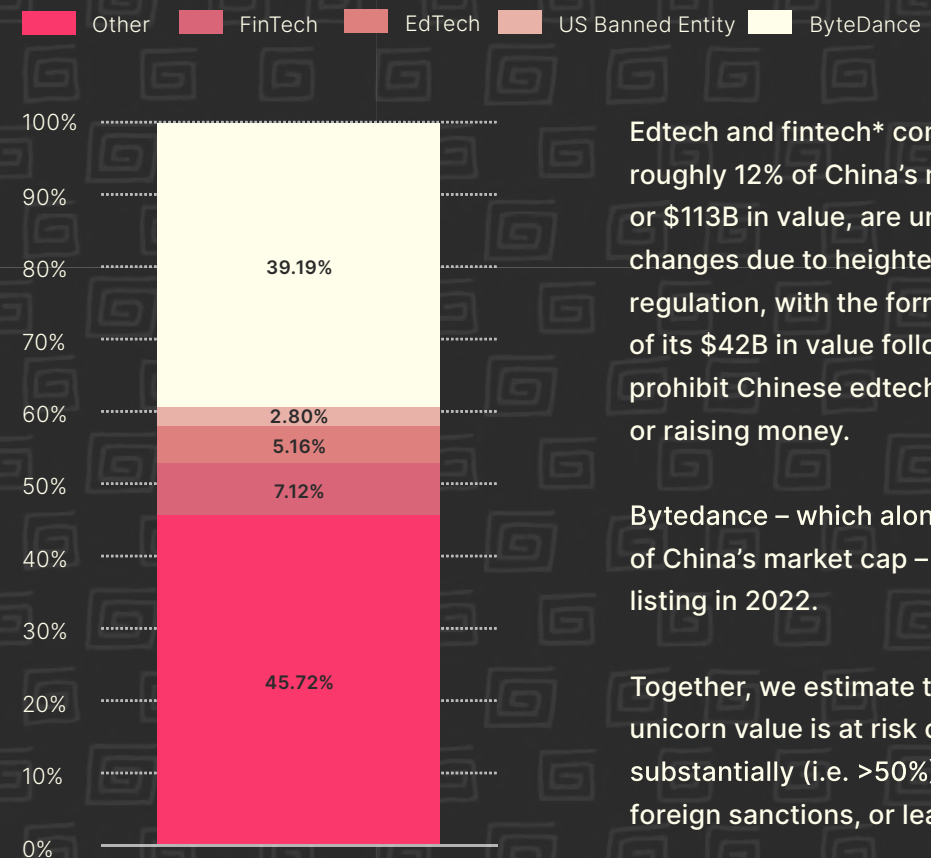
The implications of these changes for China's unicorn market are far-reaching. Prior to this year, China was the largest market for unicorn companies in the world, taking the lead from the U.S. in 2019.

That lead, since relinquished, now stands well beyond reach.

China's unicorn market grew at a rapid 82.5% CAGR from 2014-2017, followed by just 15.1% CAGR 2018-2021, making China the only global market to see decelerating growth over the last three years.

Should this stagnation continue, there is a real possibility that EMEA displaces China as the largest non-U.S. market in the coming year.

WHAT'S AT RISK : CHINA 2021 MARKET CAP DISTRIBUTION



Edtech and fintech* companies representing roughly 12% of China's market capitalization, or \$113B in value, are undergoing existential changes due to heightened scrutiny and regulation, with the former primed to lose most of its \$42B in value following new regulations that prohibit Chinese edtech companies from making or raising money.

ByteDance – which alone represents 39%+ of China's market cap – is considering a public listing in 2022.

Together, we estimate that over 50% of China's unicorn value is at risk of being marked down substantially (i.e. >50%), incurring additional foreign sanctions, or leaving the private markets.

As for the other unicorns, nearly every tech-driven business in China has been in some way affected by the nation's sweeping crackdowns, which are detailed further later in the report.

* Fintech companies in the following analysis are those whose core business is in lending, banking, crypto, or insurance.

Unicorn with Chinese Characteristics'

DECA-DOMINANCE

As noted in “Rapid Growth, False Narratives,” the additional value captured by the world’s largest unicorns as they stay private an additional two years has been one of the market’s most salient growth narratives over the past five years.

Nowhere is this dynamic more pronounced than in China, home of the world’s largest unicorn, ByteDance (\$360B), owner and operator of the ephemeral content app TikTok. Over the past three years, the company has added \$285B in implied value to the country’s unicorn market.

China is the only global market in which decacorns, \$10B+ companies, consistently represent 50%+ market share. It has maintained this composition with a much larger base than APAC and the Americas.

As referenced in the Unicorn Diaspora section, the Americas were a \$22B unicorn market in 2019, while APAC was sized at \$142B to China’s \$602B in 2019. Furthermore, while the latter is the second-most skewed market in the world, the scale of its winners isn’t close. Between Xiaomi, (2014), Ant (2018-20), and ByteDance (2021), Chinese companies have been the largest in the world for five of the past eight years.

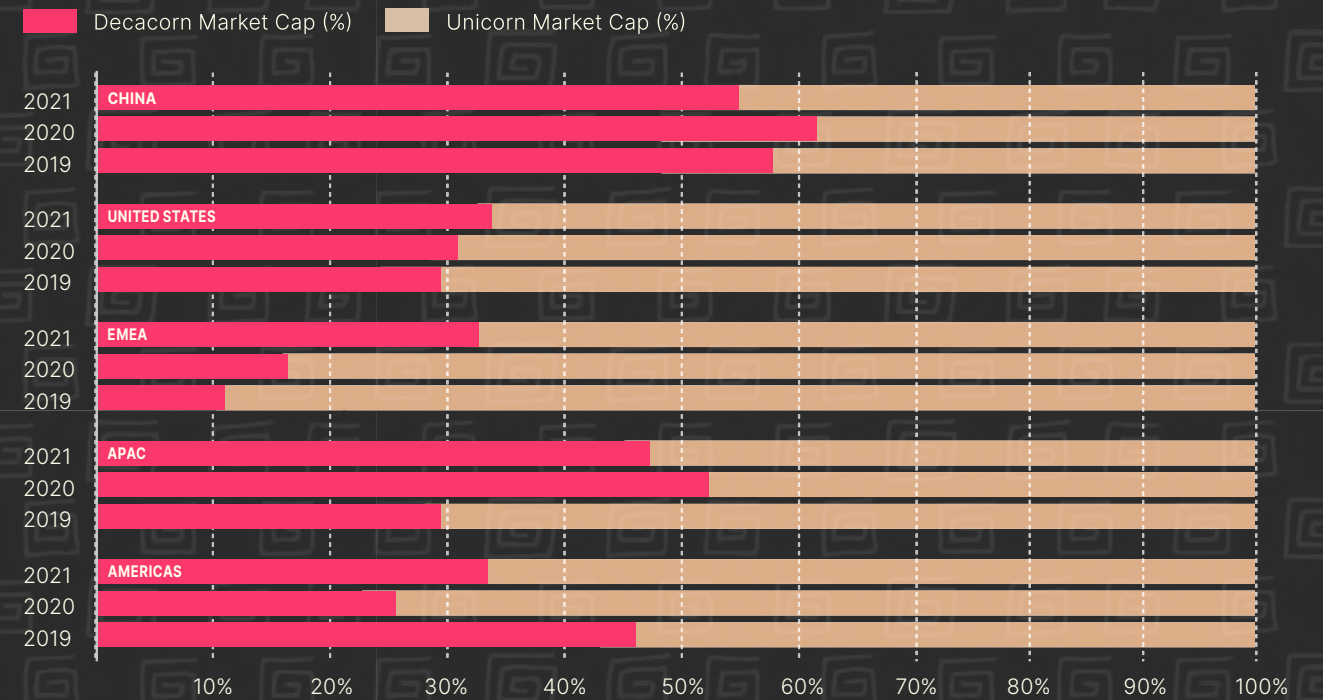
This observation, however, belies an important nuance. As the very largest companies in China are targeted by virtue of their size, its bench of \$1-5B companies – one of the best indications of future growth – has experienced little to no growth since 2018.*

Unlike EMEA and the United States, China’s market position among global unicorn leaders is a function of the power of economies of scale and network effects that its very best companies leverage once they get to critical mass. Should further sanctions preclude such growth dynamics moving forward, the country does not currently have the bench of sub-deca unicorns to make up for the change.

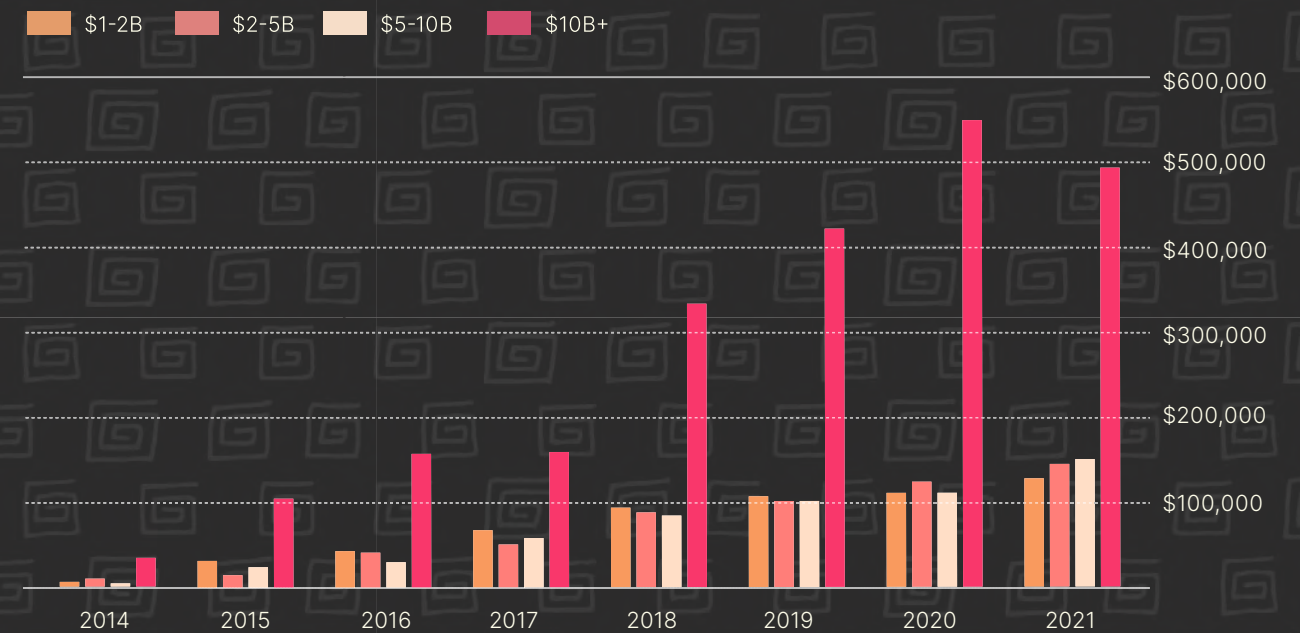
Given the disconnect in value between at-scale and scaling unicorns in this market, the wing clipping of Chinese Dragons represents a significant complication to the general health of China’s unicorn market.

The country’s prospects now rest on the shoulders of “social commerce” savants Sheln and Xiaohongshu, both global players who have had remarkable success to date in disrupting fast fashion and ecommerce. Should one of the two experience a ByteDance-like surge in scale in 2022, it may offset the effect of structural impediments for tech companies and the nation’s paucity of non-Dragons.

DECA-DOMINANCE BY GLOBAL MARKET



CHINA MARKET CAP BY COMPANY VALUATION RANGE (\$M)



* This composition is also a testament to the availability of capital in the public markets for these \$1-5B businesses, which, on average, opt to list 1.4 years sooner than their global counterparts. Potential changes to the treatment of VIEs, which may limit such exits, could serve as a source of added value for the Chinese unicorn market in 2022.

It Starts at the Top

Observable size, as measured by market cap, undersells the import and reach of China's largest tech businesses. The disparity in size between China's national winners – i.e. its top four to five tech giants – and all others manifests itself in three ways: the ubiquity of top companies in daily life, the outsized success of their unicorn spin-offs, and their underlying stakes in other top unicorns.

While the first item is noted in the preceding sections, it does not include the two public companies mentioned in the introduction: Tencent and Alibaba.

Tencent's WeChat, the consummate superapp, has a ubiquitous influence in daily life and the company is a global leader with respect to entertainment, social media, and advertising.

Alibaba, meanwhile, is the Amazon of China, the preeminent ecommerce company in one of the world's largest consumer economies. It operates the country's largest B2B, B2C, and P2P marketplaces.

Both Tencent and Alibaba – as well as fellow national winners JD and Baidu – have given birth to some of the most successful unicorns in the world, all dwarfed by Alibaba's Ant Group, recently the largest company in the world at \$200B.

Leveraging its vast trove of consumer insights, the company, among other activities, assesses risk competitively and offers borrowing services to those underserved by state and regional banks. JD, a leading online and offline retailer, leads the group in count of "prodigal children" (see spin-offs), as two have consummated successful listings and now stand at \$20B+ valuations, while another appears poised for a similar outcome.

Alibaba also owns, but has not spun out, Ele.me (last valued at \$30B), one of the country's two largest food delivery services, and Cainiao (\$34B), a warehousing and tracking service provider.

PRODIGAL CHILDREN: NOTABLE CHINESE SPIN-OFFS

COMPANY	VALUE (\$M)	STATUS	PARENT
Ant Group*	\$200B	Filed for IPO*	Alibaba
JD Health	\$31B	Public	JD
JD Logistics	\$26B	Public	JD
JD Digits	\$19B	Private	JD
Tencent Music	\$13B	Public	Tencent
Dada Nexus	\$5B	Public	JD
Kunlun AI	\$2B	Private	Baidu

The final, and perhaps most telling sign of these winners' reach is their early investments in the world's best unicorns.

Alibaba and Tencent together have investments in a quarter of the top 20 Chinese unicorns by market cap, and have invested in 19% of global decacorns.

Tencent has been particularly prolific, with Bloomberg Intelligence sizing its investment portfolio at ~\$185B in Sept. 2021.

The company has invested in top now-public companies such as Tesla, Uber, and Roblox to go with private unicorns Nubank, Epic Games, and Discord. Alibaba's portfolio, meanwhile, includes Snap, Lyft, Snap, JD, Grab, and Tokopedia.

Private valuations as of Oct. 18, 2021. Public valuations based on market capitalization as of Nov. 8, 2021.

*Ant IPO filing expired Oct. 20, 2021. The company is excluded from report data as the date was after Oct. 18, 2021.

The company remains excluded from Destiny DD data on a go-forward basis due to: unclear operational and regulatory structure, state funding / integration with lending business, and no notice of rescinding plans for forthcoming IPO

China's Crackdown on Core Unicorn Verticals

The COVID pandemic has served to reveal and heighten the centrality of online products and services in daily life, shining light on the role of leading players in the Chinese tech ecosystem, many of whom have faced limited regulation over the past half decade due to the country's "light-touch" approach.

Any one explanation for the crackdown affecting these companies, however, would neglect the fact that this is a **narrative constellation**, a set of loosely (but not causally) related narratives that reinforce one another, with one narrative making the others more believable by dint of their shared association with a common theme.

Here, China has acted firmly to limit the power of tech companies whose role in the economy has become increasingly apparent with the pandemic, though the motivations and implications differ with respect to each action.

Wing clipping in China has been focused on limiting monopolization, protecting information, avoiding the "disorderly expansion of capital," reducing distraction, and a host of other considerations, touching nearly every player in the country's tech ecosystem.

Here, we focus on three core unicorn areas – fintech, online education, and entertainment – that have been affected, and the nuances behind each crackdown.



FinTech

What happened?

Jack Ma's speech in November 2020 decrying the "pawnshop mentality" of state-owned banks precipitated a dramatic fall from grace for China's richest man and a series of regulatory crackdowns affecting nearly every tech-driven industry.

Ma's Ant Group, previously the largest unicorn in the world at \$200B, has since faced the last-second cancellation of its IPO and wholesale changes to its lending business (which was split into two separate entities).

Others in fintech face a bevy of proposed and implemented regulations, most notably capital requirements and caps for online lending, anti-monopoly statutes, data protection standards, and geographic restrictions concerning regional banks.

Insurance, crypto, and other fintech verticals have also been hit with sanctions.

What does it mean?

In the market that gave birth to the superapp, it would be unwise for leading players to take a victory lap.

As noted earlier, Tencent and Ant have made use of the "disorderly expansion of capital" to serve as gatekeepers, a duopoly in all but name that exercises significant control over the Chinese payments ecosystem. Indeed, Ant's promise to democratize access to lending was a testament to the winner-takes-all dynamics that befit services with sizable informational advantages.

As Ant and fellow tech titans Tencent and JD face the repercussions of flying too close to the sun, the state-owned banks that these upstarts were poised to displace stand to benefit from a leveled playing field in which tech players, traditional institutions, and regulatory agencies must all collaborate.

Sample Unicorns

Ant Group (previously \$200B), JD Digits (\$19B), Bitmain (\$15B), Suning Finance (\$8B)

EdTech

What happened?

In late July, the CCP announced a set of constraints targeting companies in private education, a \$100B market.

Overnight, companies in the sector were prohibited from making money, raising capital, or listing on a public exchange.

Leading publicly-traded edtech companies, namely New Oriental and TAL, lost upwards of 75% of their market capitalization in a matter of days, while a tide of bankruptcies brought a swift end to many of their less fortunate peers.

What does it mean?

That the timing of these dictates coincided with those affecting the financial services industry is merely coincidental.

China's latest 5 Year Plan makes note of plans to increase the nation's urban educated population and this change starts with reducing the prohibitively high cost of education, much of which is attributable to private schools and tutoring services.

The crackdown was also grounded in survey results from 100k+ parents and related to a hot topic among state media outlets, which is to say that the action itself was less surprising than the alacrity with which the action was taken.

For edtech companies, the implications are clear: the party's over.

Sample Unicorns

Yuanfudao (\$15.5B), Zouyebang (\$7.3B), VIPKid (\$4.5B)

Gaming & Entertainment

What happened?

A continuation of China's tech clampdown and severe rebuke of fandom, celebrity influencers, "cissy" culture, and all things "overly entertaining" have together created a perfect storm for the country's entertainment sector.

China's broadcast regulator, the National Radio and Television Administration, has spent the year issuing proclamations, such as an order that broadcasters "resolutely resist showing off wealth and enjoyment, hyping up gossip and privacy, negative hot topics, vulgar 'internet celebrities', and the bottomless appreciation of ugliness, and other pan-entertainment tendencies."

In a similar vein, Beijing has signaled that it will limit the time that children can play video games to three hours a week— one hour on Friday, Saturday, and Sunday of each week – in addition to anti-addiction measures and checks on in-game purchases. It has also put an end to various anime series that it sees as too vulgar or to not be of educational value.

What does it mean?

While some of these changes likely top the wish list of any Western parent with teens, taken together, they appear to represent an admonition against the cultural mores of China's younger generations.

As we discuss in the following section, though, there is a compelling case to be made that this is less a cultural consideration than a natural byproduct of a particular national view with respect to the role of technology in society and people's daily lives.

China is sending a message as to what types of technological innovation it will encourage, and products that monetize distraction (entertainment) and the manipulation of class anxiety (online education and tutoring) are low on the totem pole.

Sample Unicorns

Bytedance (\$360B), Shein (\$15B), Xiaohongshu (\$5B), Yixia (\$4B)

BITS TO ATOMS



AFKD93J SLA83 S0W333 DKLLD0

W03-2 HE WHO CONTROLS

THE SPICE CONTROLS THE

UNIVERSE ALLEPPS093K 3749W

AI-129 DJD*KD DJDUS D23

DSJDI** SJ302JD SKKE;;SA 28

D-JD3-222 FRANK HERBERT

TODAY'S GLOBAL ECONOMY IS NOT ALL THAT DISSIMILAR FROM HERBERT'S DREAMSCAPE:

Frank Herbert's novel *Dune*, recently re-adapted for film, envisions a future in which humanity's capacity for interstellar travel is a function of its access to melange, a drug hidden away in the unforgiving dunes of planet Arrakis. Control of the cosmos is a function of control over Arrakis and, ipso facto, "the spice."

Today's global economy is not all that dissimilar from Herbert's dreamscape: it is largely dependent on "bits" (software) running on "atoms" (hardware) that enable progress in communication, transportation, and other areas of innovation. Proprietary intellectual property (IP) relating to atoms – semiconductors in particular – is now the spice of the world economy.

The preceding sections have detailed China's unicorn market dynamics and its recent tech crackdown.

The following sections will go one step further and tie everything together, articulating our thesis that this is not a mere crackdown; it is a fundamental reorganization of labor and incentives to again focus on IP-rich "atoms" over consumerized "bits."

Previously looking to others for chips and basic research, China is now focused on generating IP so as to become more self-sufficient. In doing so, it has invested heavily in science and technology, reduced barriers to education, and rid itself of potential distractions. Consumer internet companies stand to get the short end of the stick.

THAT WHICH IS SEEN, THAT WHICH IS NOT SEEN

Foundational work seldom attracts the eyes of the masses, though its applications often do. This is an inescapable characteristic of most internet businesses, which, while profitable and scalable, are ultimately dependent on basic research and advanced manufacturing.

In 2019, economist Dan Wang [made](#) the following observation, providing a useful framework for making sense of the bits / atoms dichotomy:

"I find it bizarre that the world has decided that consumer internet is the highest form of technology... The apps [Tencent, Facebook, and others] develop offer fun, productivity-dragging distractions; and the companies pull smart kids from R&D-intensive fields like materials science or semiconductor manufacturing, into ad optimization and game development.

The internet companies in San Francisco and Beijing are highly skilled at business model innovation and leveraging network effects, not necessarily R&D and the creation of new IP... I wish we would drop the notion that China is leading in technology because it has a vibrant consumer internet. A large population of people who play games, buy household goods online, and order food delivery does not make a country a technological or scientific leader."

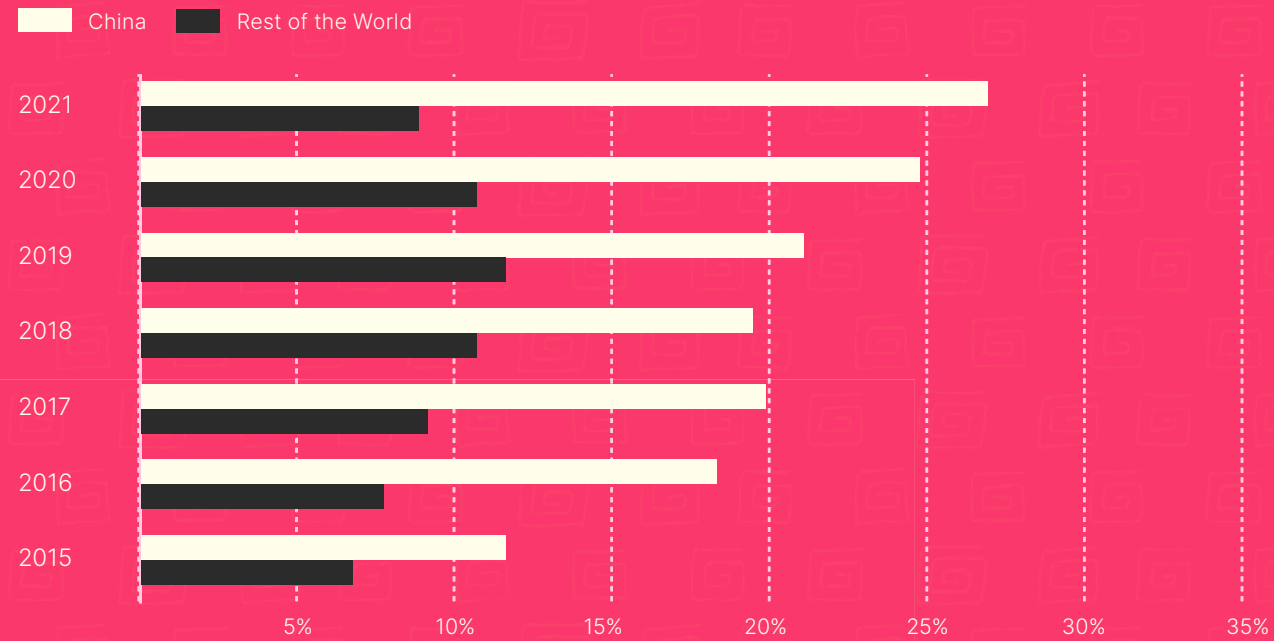
Much of the value that companies such as ByteDance, Tencent, and Alibaba have captured is attributable to increased consumer spend and network effects, neither of which does much to solve the country's spice problem.

China only spends 5-7% of its R&D on basic research – as compared to 15%+ in the U.S. – and its innovation has largely been on the applied research side as it takes cutting edge breakthroughs and applies them to practical considerations.

While the share of unicorn value attributable to businesses focused on atoms is skewed by the outlier success of Xiaomi (\$40B+ from 2014-17), the count of atom-focused unicorns in China appears to cleanly suggest that the country leads the world in producing unicorns focused on hardware.

This, however, would be to make the same mistake noted by Wang.

ATOMS AS % OF UNICORN COUNT



Looking at the distribution of atoms-focused unicorns, China has a disproportionate share of companies using applied research to produce consumerized offerings such as smart home appliances (Smartmi), intelligent convenience stores (Bianlifeng), and electric cars (Nio, WM Motor, Xpeng, and many others).

While consumer hardware offerings accounted for 22% of atoms count elsewhere, they accounted for 62% in China from 2015-2021.

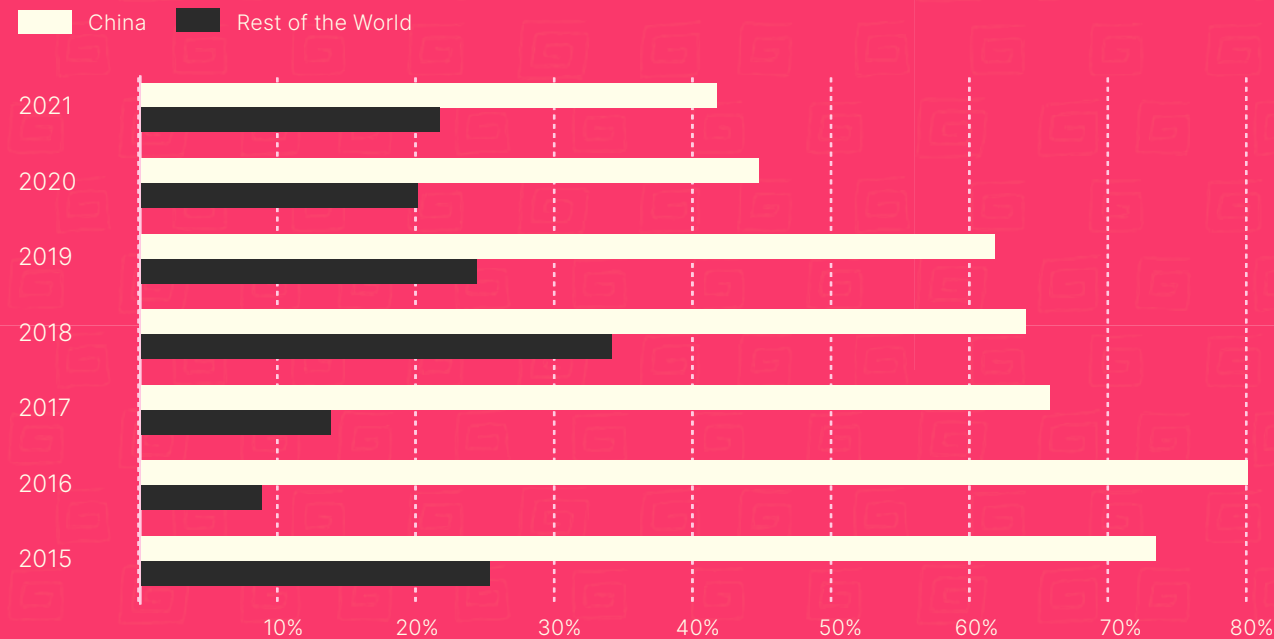
As it has with ecommerce platforms, sharing apps, and others, China's thriving internet economy has incentivized the development of hardware that is focused on meeting consumer needs, making use of unique business models while producing a limited amount of intellectual property.

As noted in the following section, it has used a "catch-up" strategy of adapting existing technology, lowering the cost of production, and layering in incremental improvements.

But creating the next Tesla or intelligent home appliances won't do much to solve China's underlying deficiencies. High profile flops – most notably a [\\$20B semiconductor facility](#) that had to be handed over to the state – and an applied research focus that favors adaptation over instigation have kept it reliant on others for its precious spice.

Note: "Atoms" refers to businesses primarily focused on hardware, while "bits" refers to those focused on software and platforms. Analysis excludes unicorns in healthcare and non-tech industries.

CONSUMER PRODUCTS AS % OF ATOMS COUNT



AFKD93J SLA83 S0W333 DKLLD0

W03-2 A METHOD TO THE

MADNESS? ALLEPPS093 3749W

AI-129 DJD*_KD DJDUS

D23DSJDI** MDTISABDI-K

SKKE;;SA 28D-IS3222FKA93J

SLA83 S0W333DKLLD0 W03-2

WE BELIEVE THAT CHINA'S TECH CRACKDOWN CAN BE UNDERSTOOD THROUGH THREE CONSIDERATIONS:

- > RAIL BUILDING
- > POPULATION-FIRST POLICY
- > BITS TO ATOMS

	RAIL BUILDING	POPULATION-FIRST POLICY
ILLUSTRATIVE CRACKDOWNS	Antitrust	Online education
	Data protection	Sharing economy
	Lending	City housing rent controls
	VIEs and overseas listings	Gaming, fandom, and celebrity culture
	Food packaging and labeling	Fines for the “excessively rich”
MOTIVATION	Establish regulatory rails for areas in need of supervision. Focus on “light-touch” areas such as technology and capital markets.	Actively redress areas of general discontent and limit prevalence of activities deemed unproductive or out of line with ideology

China has used antitrust policy, data protection legislation, and capital flow restraints as means for limiting systemic risk and monopolization in information technology and financial services, both of which have been thinly regulated relative to similar industries elsewhere.

New policy focused on reducing misleading information on food and cosmetics represents another area where the country is building out its regulatory rails.

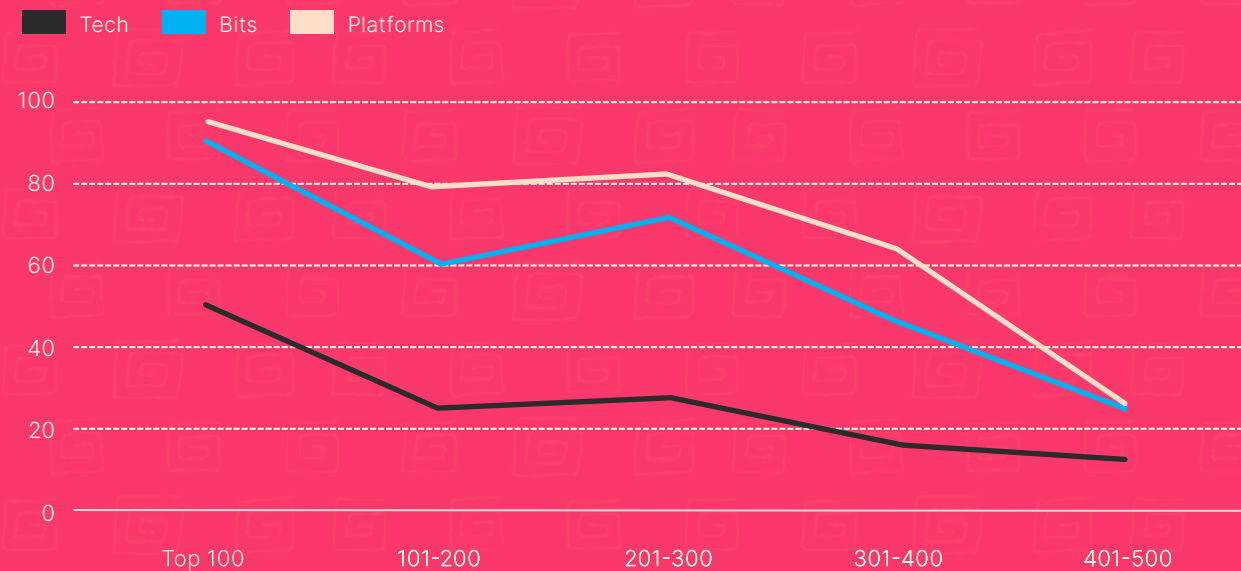
The country’s decade-long “light-touch” regulation of emerging segments of its economy has given way to a clenched fist.

Meanwhile, government bodies have noted that gaming and fandom have propagated a net-detrimental set of cultural values and divert the youths’ attention – attention that would be better spent making use of the profit-free tutoring services that investors unwittingly paid for.

Other potential areas of societal discontent and those with implications that are at odds with plans for a larger, globally competitive population have faced scrutiny as well. Underpinning all these changes is the nation’s push for “common prosperity.”

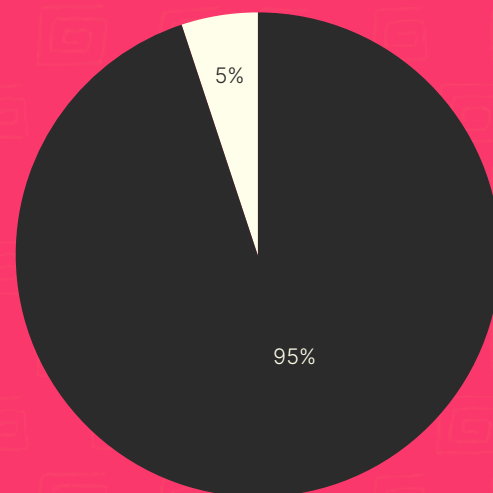
As noted earlier, however, China’s plans to move from bits to spice-rich atoms appears to be the most systemically significant consideration of the three with respect to its unicorn market, as the move entails a fundamental shift in how the country builds and mobilizes its domestic resources.

REPRIMANDS DECLINED SIGNIFICANTLY AS FIRMS GOT SMALLER



95% OF BITS COMPANIES REPRIMANDED

■ Bits subjected to regulatory action
■ Atoms subjected to regulatory action



Data from economic research firm Macro Polo suggests that China has focused its reprimands on its largest private companies, particularly those with businesses in bits.

Among the top 100 companies by market capitalization (in a market with 187 unicorns), 93% of bits companies were reprimanded, to only 49% of atoms companies.

The same held for the top 200 largest private companies, in which 61% of bits companies and 23% of atoms were reprimanded. Taken together, 95% of all reprimanded firms were focused on bits, while only 5% were focused on atoms.

Note: Platforms are a subset of bits companies. Total number of bits by tier: top 100 = 29; 101-200 = 18; 201-300 = 15; 301-400 = 13; 401-500 = 18; total number of platforms by tier: top 100 = 27; 101-200 = 14; 201-300 = 12; 301-400 = 8; 401-500 = 14.
Source: Hurun China 500 Most Valuable Private Companies 2020; MacroPolo.

These actions are not to be viewed alone; instead, they are to be seen as part of a concerted effort by the CCP to reshape its economy so that it is best suited to produce IP-generative atoms over bits.

To do so, it has followed the framework for developing technological knowledge detailed by Naughton in his [seminal work](#) on Chinese economics.

Naughton notes that domestic technological improvement “can be likened to a superior set of blueprints” that help a country maximize production given a certain set of inputs. He defines the knowledge-production function specific to China’s economy as follows:

$$\text{Technological Knowledge} = f(\text{R\&D, human resources, incentives})$$

BITS TO ATOMS

	R&D	HUMAN RESOURCE BASE	INCENTIVES
DEFINITION	Volume of resources used in R&D and applied to production processes	Capability of labor force to discover, improve, and implement more sophisticated technologies	Institutions providing rewards for people to make changes in their way of doing things
BEFORE	Leverage FDI to integrate with global production and innovation networks. MLP and SEI plans increase funding but don’t solve the spice problem. Mega projects are a black eye	Let citizens study abroad, broaden tertiary education intake, and focus on STEM. The 1,000 Talents Plan brings leading experts to China	Wide variety of policies provide financial support (e.g. tax breaks, government contracts), “light touch” used in emerging areas, and encourage investment funds for tech.
NOW	Subsidize R&D and focus on basic research, particularly in areas relevant to the country’s SEIs. Improve planning and management of megaprojects.	Reduce points of friction such as tutoring costs, gaming, and celebrity culture. Grow urban population and ensure that STEM talent is put to use in high value fields.	Hard break with “light-touch” policy, especially in fintech and consumer internet. Continue support for SEIs. China <u>becomes</u> venture capitalist state with stakes in companies

While it is again worth noting China's previous missteps in planning and financial mismanagement with respect to high-profile semiconductor projects, its focus on applied research has been more meaningful in shaping the composition of its unicorn market.

As noted by Naughton, China has long adhered to a "catch-up strategy" where countries concentrate on "selecting, transferring, and adapting the best existing technologies, combining them with their inexpensive production factors to build competitive advantage for their companies." Now, it hopes to fashion itself as a first mover.

China's crackdown is a function of its move away from the aforementioned strategy. Dragons and unicorns whose scale is attributable to network effects, business model innovation, and incremental technological improvement lose the benefits of a light touch; those who produce valuable IP and fundamental breakthroughs get protection and financial support.

The excesses of the consumer economy have been restricted, limiting the value those in STEM fields can ascribe to pursuing a career at such companies. Reduced faith in the internet economy's assumed superiority, the CCP hopes, will push talent to Strategic Emerging Industries (SEIs) such as materials science, information technology hardware, and medical equipment.

This is all to say that China's wing clipping, itself a constellation of narratives, is best viewed as part of another constellation: that of the country's move from bits to atoms.

In cutting out areas of friction and limiting the power of offerings that fall short in incentivizing the production of IP or otherwise advancing national interests, China has initiated changes that serve to solve its spice problem.

The country's moves aren't to be seen as reductive or inherently malign; instead, they are part of a top-down reshuffling in which resources, labor, and incentives are mobilized to produce IP-rich atoms over consumerized bits.

CONCLUSION

In a 2017 speech, then-SEC head Jay Clayton noted that "the potential lasting effects... to the economy and society" of concentrated growth in the private markets were "in two words, not good." Today, this sentiment looks remarkably prescient, though it is perhaps more useful to ask *for whom* this change has been a positive or negative.

Growth today is an embedded function of technological progress, and the rapid growth of unicorn businesses is, in one respect, a function of concurrent breakthroughs in social, SaaS, biotechnology, crypto, fintech, and other areas of innovation.

Also behind the unicorn breakout is the speed at which top companies can now get to scale, heralding the emergence of the "wundercorn."
Great worth takes great work, though, for some, it now takes far less time.

As the best private companies grow larger than ever faster than ever before, capital has rapidly accumulated in the later stages; for institutional investors, private markets are the new public markets.

Many pre-IPO investments are now as much a science as they are an art, and those who eschew the late stages run the risk of missing the next ByteDance, SpaceX, or Stripe – tech unicorns with prolonged private market stays.

The breadth and depth of unicorn companies in our daily lives is unmistakable, yet structural impediments remain due to a well-intentioned but ultimately denigrative balancing act between investor protection and access. Investment in private unicorn companies – a growing \$3.57T asset class – remains beyond the reach of the everyday investor.

In a market environment increasingly predicated on the alignment of interests and investment, the implicit exclusion of investment opportunity in many of the tech companies people know and love is still the rule. **Private inequity** – the discomfiting disequilibrium between the public and private markets – persists.

It's time for a change.

If time discovers truth, it's time the markets discover Destiny.

The Destiny Tech100 is designed to be the first publicly-traded, exchange-listed offering to enable the marriage of interest and investment in high-growth private tech businesses.

We invite you to join us as we push for a kinder form of capitalism – **one in which anyone can own the future, today. Visit D.XYZ for more.**

DESTINY THE UNICORN REPORT

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2021 YEAR IN REVIEW