PropTech
Global Trends
2020

Annual Barometer

Gouvernement Princier · PRINCIPAUTÉ DE MONACO / Extended Monaco · ESCP BUSINESS SCHOOL

Content

Executive Summary

The 2020 PropTech Annual Barometer is an in-depth analysis of the international Prop-Tech sector. It analyses the evolution of PropTech over time, with graphs depicting the historical evolution of PropTech since its initial emergence. The Barometer also identifies the sector's newcomers, the quality of its emerging companies, its peak periods, and the leading companies in the Tech sector. We also visualise the PropTech sector's geography via a world map showing the locations and amount of PropTech companies per continent and country. We also demonstrate how the geographic distribution of PropTech companies across the world has changed over time. To better understand the market dynamics, we classify all PropTech companies into 12 business categories and identify the companies with the highest valuations per category, allowing us to compare the composition of the categories in different countries. Finally, we analyse the evolution of PropTech investors over time. In particular, we identify which countries, companies, and categories attract the most funding from investors and who are the top global investors in the PropTech sector.

This barometer has been produced by Professor Jaime Luque at the ESCP Business School as part of the Real Estate Tech Innovation program sponsored by the Government of Monaco

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PropTech: Investing, Building, Managing and Living in a digital world.

What is PropTech?

PropTech (also called Real Estate Tech, Retech, Estech, or RealTech) is short for "property technology." The term refers to the software, tools, platforms, apps, websites, and other digital solutions employed by Real estate practitioners, from brokers and appraisers to architects and construction managers. It encompasses Contech (construction technology) and CREtech (commercial real estate) and overlaps with Fintech. Proptech improves efficiency and facilitates Real Estate activities, including buying, selling, leasing, managing, appraising, financing, marketing, developing, designing, building, and investing.

Why does it matter?

We should all be aware of and understand the current wave of PropTech, as it concerns every single one of us. We are all Real Estate consumers that will be directly or indirectly affected by the changes to the Real Estate industry inspired by the surge in the number and the quality of PropTech. It changes and will continue to change how we make serious decisions such as buying or renting, selling or leasing a property, and the way Real Estate agencies function and are structured. It's playing a crucial part in the global digital revolution in which we live and shall continue doing so for years to come.

Why Now?

The application of technology and innovation to Real Estate came late compared to all the other industries involved in the global digital revolution. One reason for this delay was the success and profitability of the old commission-based business model. Another reason was the hyper-local nature and high regulation of the real estate market, which primarily involved private assets. Additionally, homebuyers were wary of using new and unaccustomed methods for what's likely to be the acquisition of their most valuable asset. Above all, the illiquidity of properties made it hard for the real estate market to keep up with the era of fast-paced liquid transactions online. All the above reasons contributed to a tendency of resistance by the different stakeholders in the real estate market.

The generational changes sparked by the digital revolution triggered the arrival of PropTech. With the modernisation of everything around them, millennials require everything to operate quickly and efficiently, including the real estate market. **The delay in innovation has led to an incredibly dynamic change in PropTech as it is catching up with the other digital industries and taking the investment world by storm.**

PropTech Opportunities

PropTech provides massive opportunities to make money through 3 primary means: accessibility of information, efficient transactions, and simplified management and control.

Information

The digitalisation of data is facilitating access to mass market information quickly and cheaply. Thanks to advances in technology, the times of bulky physical data sheets are over. Instead, everything can be digitally recorded and retrieved online, from public records to office lease data, from market fluctuations to real-time boiler temperatures.

Transactions

People are becoming increasingly accustomed to using fast, secure and straightforward platforms to get a mortgage, lease workspace, sign contracts, and sell houses, among other things.

Management and control

Mobiles phones and other technological devices are becoming more and more sophisticated and can now be used as dashboards that allow for easy management and control of everything.

PropTech Company Categories

In this study, all PropTech companies are classified into 12 different categories to better understand the wide range of PropTech company typologies and analyse their market performance.

INVESTING

Portfolio Management

Tools that real estate investors employ to analyse real estate investment opportunities and make more well-informed decisions to maximise their expected return within an appropriate level of risk exposure and platforms to make such investments. E.g., Money360, Rootstock, Lendinvest, Fundrise, PropertyPartner, HouseCanary, Cadre.

BUILDING

Construction Management

Cutting-edge technologies that aim to facilitate and improve planning, design, management, and construction of new buildings, such as construction visualisation tools and management platforms for blueprints. E.g. ProCore, BuildingConnected, PlanGrid, EquipmentShare, Katerra

Indoor Mapping

Software that helps and improves the visualisation of a building and provides spatial data on a digital 2D or 3D map. It helps to project and optimize buildings' future design and flow and enables users to create 3D and virtual reality models of real-world spaces that can be experienced, changed, and shared online. E.g. 3vjia, Matterport, Modsy, HOVER, NavVis.

PropTech Company Categories

MANAGING

Short-term rentals/ vacation search

Consumer tools that help arrange and offer short-term homestays and holiday rentals. These include platforms offering individuals' real estate rental listings and the well-known traditional holiday rental search engines. E.g., Airbnb, Hoteltonight, HomeAway, Tujia, ClearTrip, Expedia.

Long-term rentals/Sale search

Companies that help arrange and offer long-term homestays and help consumers sell or purchase listed properties. These companies receive a commission for every transaction they facilitate. E.g., VivaReal, Compass, Quikr, Apart-mentList, Ziroom, Opendoor.

Commercial Real Estate

Tools that allow individual clients and businesses to rent or buy commercial real estate. These range from traditional commercial real estate search engines to coworking space search engines that rent out coworking space to companies or individuals who can obtain leases by the hour, day, week, month, or year. E.g., The We Company (WeWork), Kr Space, breather, Industrious, Lmeet, Ucommune.

Real Estate Agent Tools

Tools that benefit real estate agents within the property industry in terms of speed, efficiency, quality, and technologies that automate their roles. These can include real estate specific CRMs, real estate agent review platforms, and marketing tools. E.g., HomeLight, ribbon, Yopa, Pacester, Opcity, Qualia.

Property Management

Technologies that help oversee, preserve, and enhance the management and the value of rental income-properties, such as tenant and payment management, as well as cutting-edge communication, design, and servicing tools. E.g., ResMan, BuildingEngines, Buildium, Cozy, Appfolio, Hostmaker.

PropTech Company Categories

LIVING

Facility Management

These are tools that employ proprietary energy intelligence software and energy-efficient technology to measure, control, and optimize energy usage and efficiency. They reduce energy costs and the carbon footprint of several property types. E.g., Verdigris, SMSAssist, Budderfly, Entouch, Aquicore.

Life, Home, P&C Insurance

PropTech companies that principally offer homeowners and tenants life, home and property insurance, some of which are powered by artificial intelligence and behavioural economics. E.g. Lemonade, TheGuarantors, Microensure, Jetty, Neos, Kin.

Home services

Platforms and technologies that help homeowners manage and maintain their homes, as well as complete renovations by connecting them with quality home improvement professionals. E.g. ServiceTitan, Houzz, Thumbtack, Handy, Porch, Clutter.

IoT Home

Internet of Things are devices specialized in providing solutions and improving management in the home, such as home security, home automation and energy management. E.g. Trado, KeyMe, Eero, View, Netatmo, EightSleep.

Table 1: Overview of 12 PropTech Categories

Category	Companies[1]	Investment ($ Billion)[2]	Countries
Commercial Real Estate Search	91	27.6	25
Short-Term Rental/Vacation Search	120	13.68	24
Long-Term Rentals/Sale Search	184	9.86	33
Life, Home, Property & Casualty Insurance	166	9.58	26
Home Services	169	7.84	29
Portfolio Management	201	4.61	23
Facility Management	128	4.45	20
IoT Home	333	4.41	32
Property Management	169	3.11	26
Construction Management	138	2.92	21
Real Estate Agent Tools	88	2.75	15
Indoor Mapping	36	0.53	14

[1]As of December, 2019   -   [2]Investment period: 2000 to 2019   -   Data source: Venture Scanner

The Global PropTech Industry

As the number of PropTech companies has increased over time, so has the global outreach of these companies; they are now present in 64 countries worldwide. Ever since the first PropTech company was founded in 1976, the US has been holding the reigns and dominating the PropTech industry, with 60% of PropTech companies located in the United States, followed by India and EU. See Figures 1 and 2 below.

12
CATEGORIES

1,724
COMPANIES

3,118
INVESTORS

64
COUNTRIES

$84.4
BILLION
RAISED (2000–2019)

1,724 PropTech companies unequally spread in 64 countries

The USA and its enormous quantity of PropTech companies, 990 to be exact, overshadows the rest of the world. By excluding the USA, we gain perspective on the relative importance of other markets. Continental Europe, the UK and India appear to be the largest PropTech markets outside of the USA by a significant large margin. See Figure 2 and 3 below.
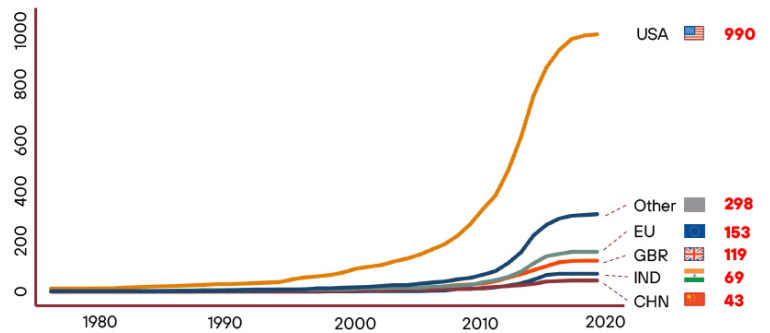
Figure 1: Emergence of PropTech Companies Over Time

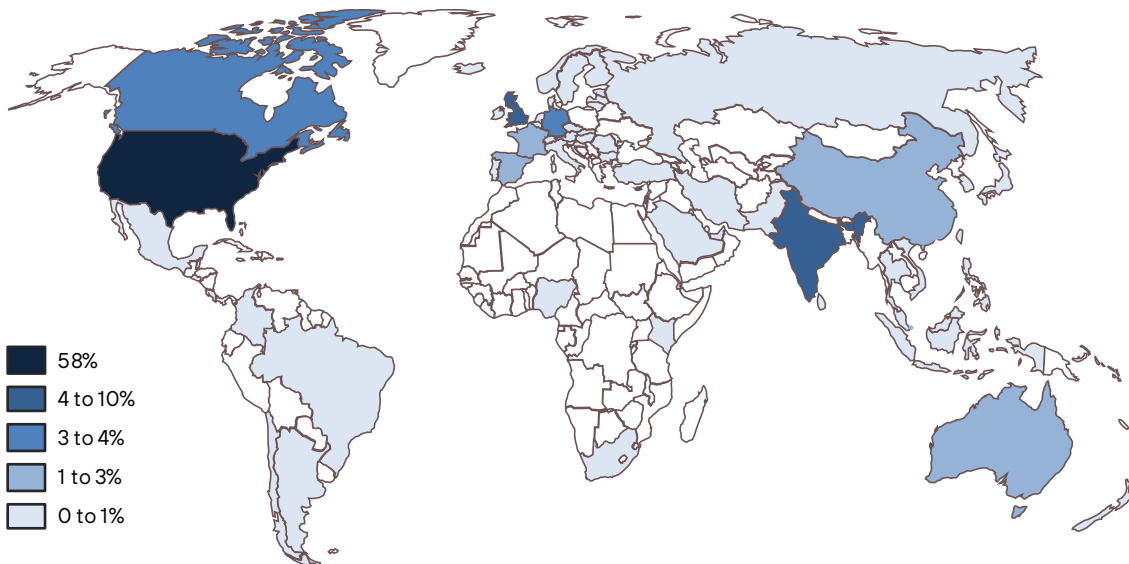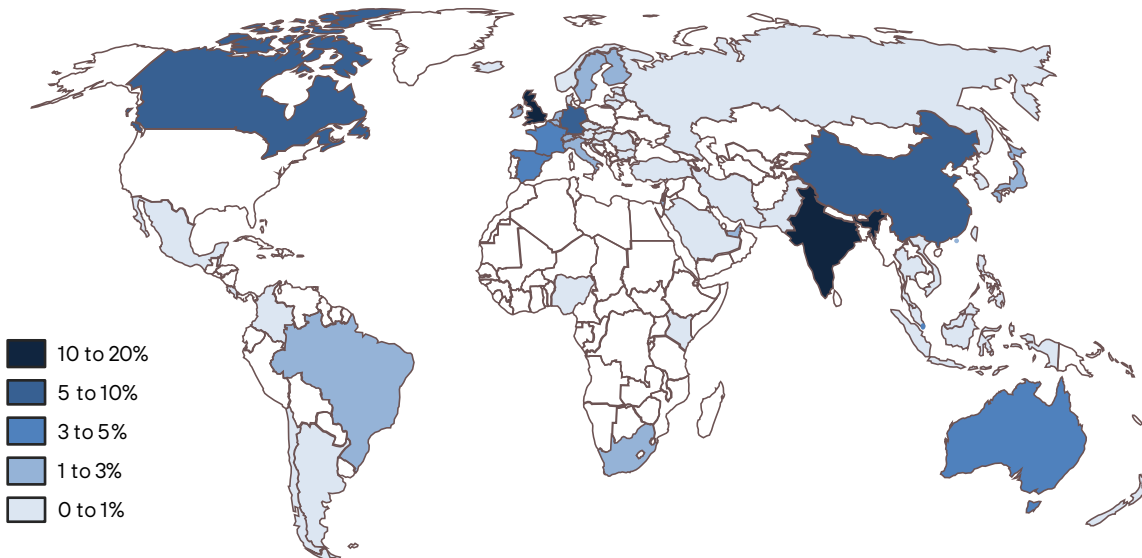
Figure 2: Global Distribution of PropTech Companies

- 58%
- 4 to 10%
- 3 to 4%
- 1 to 3%
- 0 to 1%

Figure 3: Global distribution of PropTech companies excluding USA

- 10 to 20%
- 5 to 10%
- 3 to 5%
- 1 to 3%
- 0 to 1%

Investment and funding structure of the PropTech Industry

Given the geographic distribution of companies, it is not a surprise that among the top 10 global PropTech companies, three are American, five are Chinese, one is British, and one is Indian. The top two largest companies are based in the US.

The We Company sits firmly at the top with a $22.5 Billion investment raised, which is more than five times the size of second place, Airbnb, with $4.4 Billion raised. Albeit boasting the highest number of PropTech companies after the US and India, the UK does has only one company in the top 10. The largest UK PropTech company, LendInvest, has raised $993 Million. Due to a smaller number of Chinese PropTech companies, most of the total investment funds raised are concentrated among a smaller set of companies. Despite the fact that 5 of the top 10 companies are based in China, they account for 15% of the total investment among these top 10 firms. See Figure 4.

Interestingly, the We Company, the largest PropTech company in the world in terms of investment funds raised, received nearly $1.7 Billion cash injection from Soft-bank in October 2019 as a rescue package to help WeWork fight against bankruptcy as its valuation plummeted from $47 Billion to $8 Billion in a matter of months. However, this investment fund giant may pull out from a $3 Billion purchase of shares after US securities regulators have been scrutinising the office space provider for their presentation of its financials and valuation to investors and employees. Therefore, the We Company's domination may turn out to be short-lived.

Figure 4: Top 10 Global PropTech Companies by Investment of Funds Raised (2000-2019)
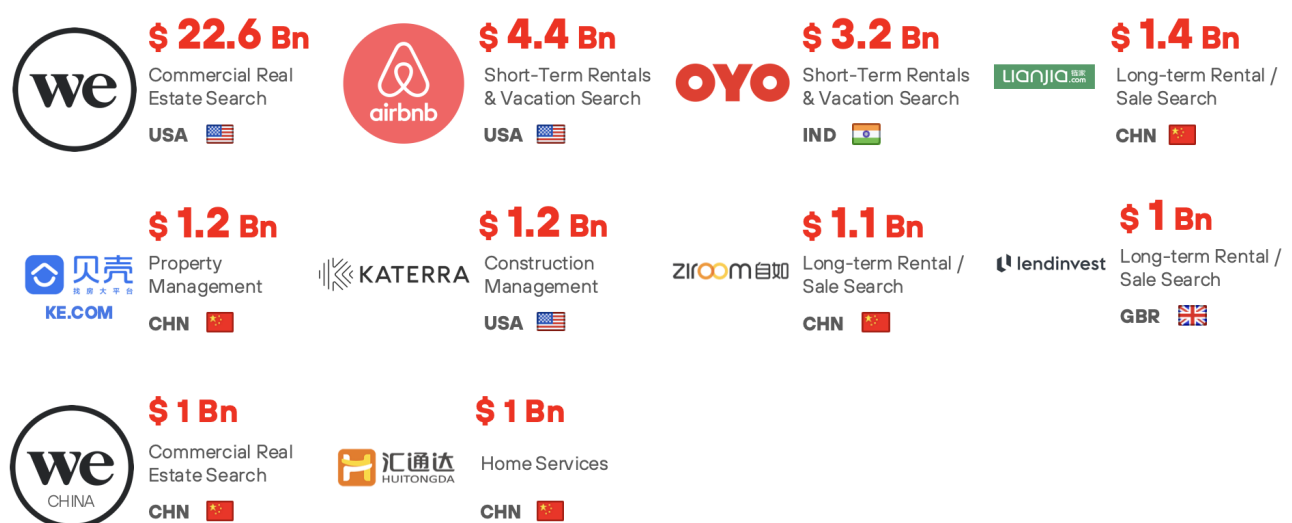
Investments per category

The category with the highest volume of investment funds raised is Commercial Real Estate Search, primarily due to the We Company that has raised not only the highest level of investment funds in its category but also raised more than the combined funds raised in each category. Figure 5 shows that in almost every single PropTech category, apart from Home Services, only one or two companies tend to dominate the market, alongside several smaller firms operating.

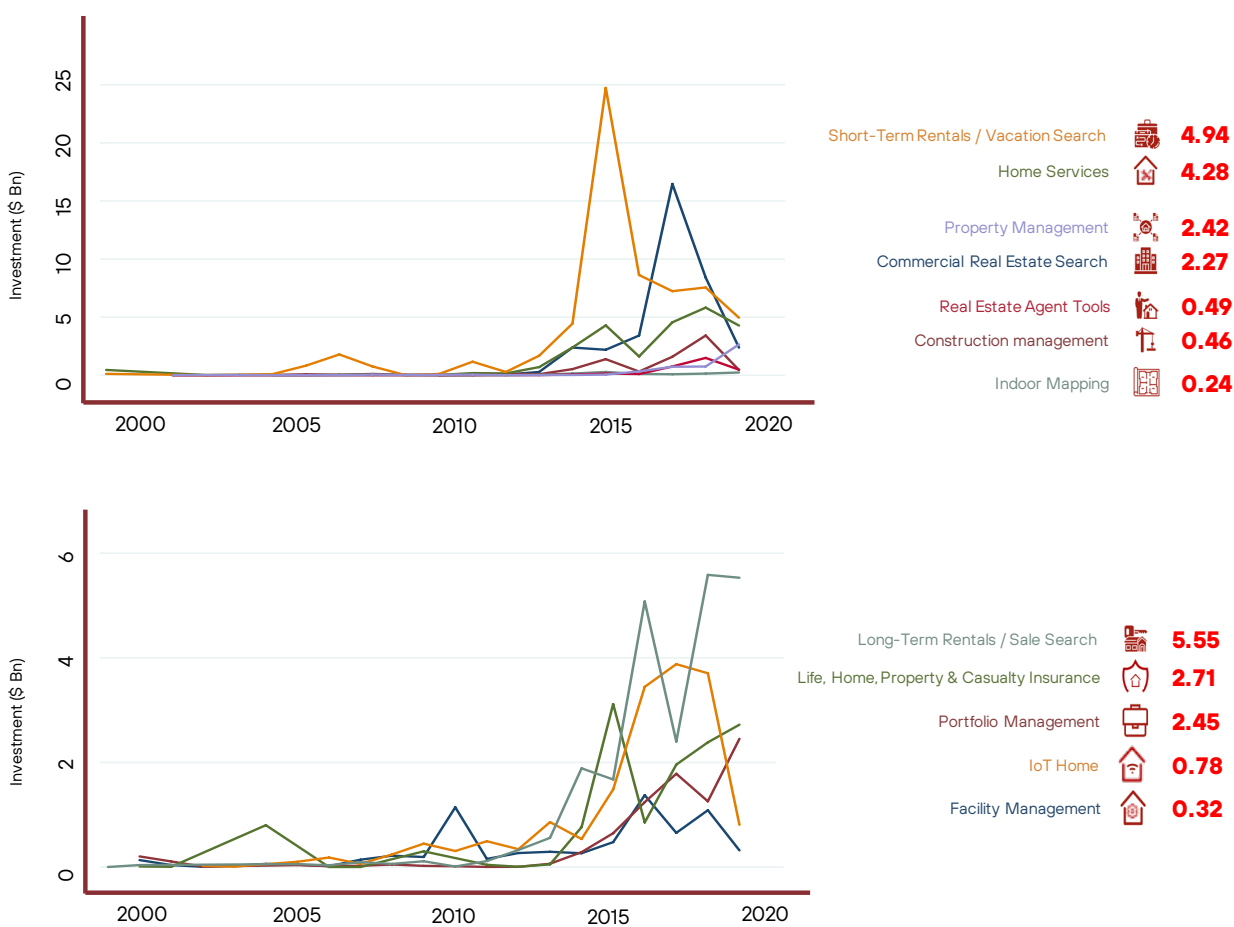**Figure 5: investment funds raised per company per category (2000-2019)**
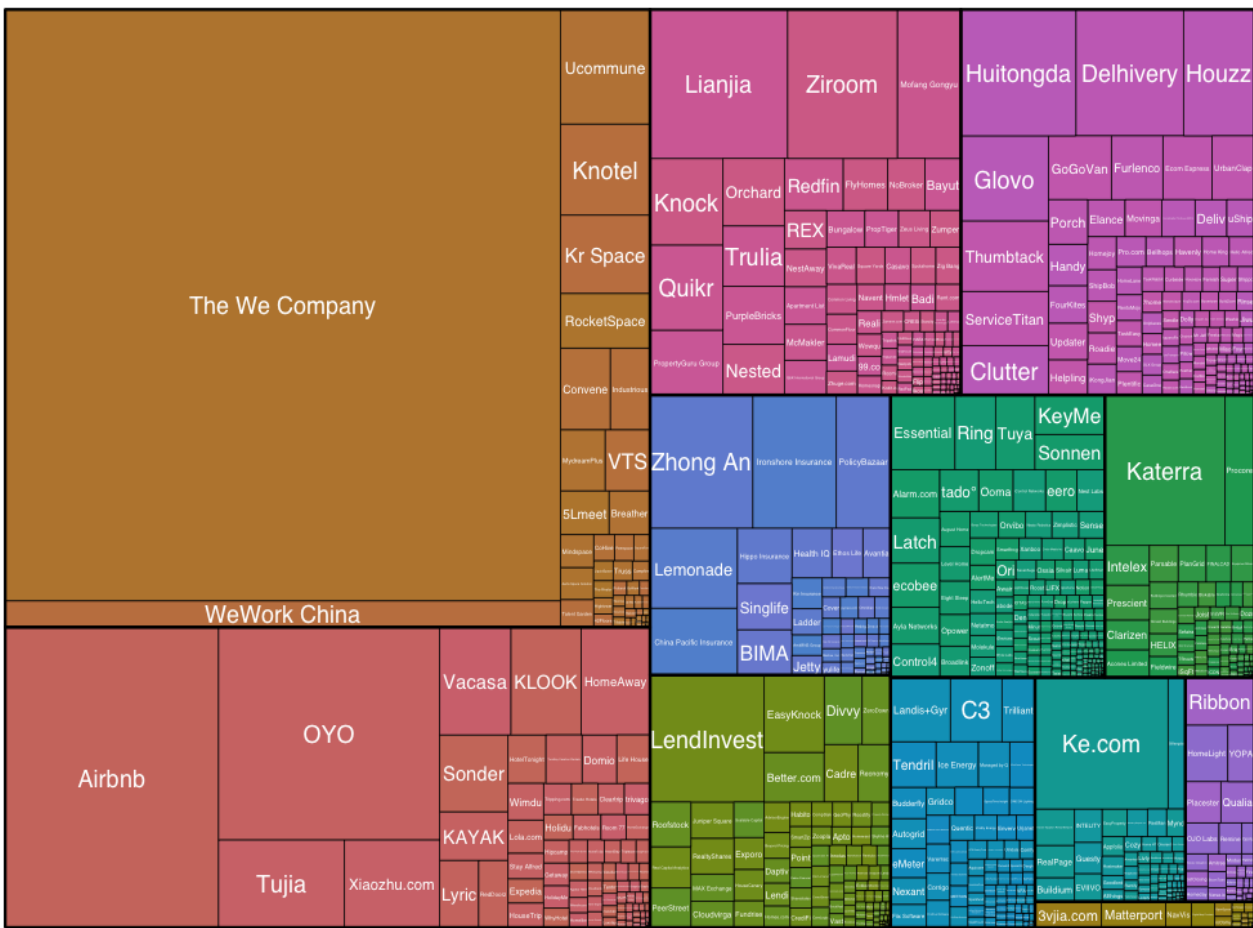
Commercial Real Estate Search

Short-Term Rentals / Vacation Search

Long-Term Rentals / Sale Search

Life, Home, Property & Casualty Insurance

Portfolio Management

Home Services

IoT Home

Facility Management

Construction Management

Property Management

Real Estate Agent Tools

Indoor Mapping

Investments per category

Figure 6 reveals that these enormous investment fund volumes are a recent phenomenon. The PropTech investment boom started post-2014; the first and largest peak in PropTech investment occurred in 2015 in the Short-Term Rental/Vacation Search category – this was largely influenced by the surge of investments in Airbnb. This company has the highest number of investors among all PropTech companies with a total of 47 different investors.

The boom in that category triggered a sporadic surge in investments in several categories, notably Long-Term Rentals/Sale Search, Commercial Real Estate Search and Real Estate Agent Tools.

Figure 6: Total investment ($ Billion) over time per category (2000-2019)

Short-Term Rentals / Vacation Search	**4.94**
Home Services	**4.28**
Property Management	**2.42**
Commercial Real Estate Search	**2.27**
Real Estate Agent Tools	**0.49**
Construction management	**0.46**
Indoor Mapping	**0.24**

Long-Term Rentals / Sale Search	**5.55**
Life, Home, Property & Casualty Insurance	**2.71**
Portfolio Management	**2.45**
IoT Home	**0.78**
Facility Management	**0.32**

Investments per category

An overview of the top 3 PropTech companies within each category is presented in Table 2

Table 2: Top Three PropTech Companies In Each Category

Category	Companies	Investment ($ Billion)	Region	Country	
Commercial Real Estate Search	The We Company	22.55	New York	USA	
	WeWork China	1.00	Shanghai	CHN	
	Ucommune	0.70	Beijing	CHN	
Construction Management	Katerra	1.24	CA	USA	
	Procore	0.30	CA	USA	
	Intelex	0.12	Ontario	CAN	
Facility Management	Landis+Gyr	0.27	Stockholm	SWE	
	C3	0.23	CA	USA	
	Trilliant	0.15	CA	USA	
Home Services	Huitongda	1.00	Jiangsu	CHN	
	Delhivery	0.93	Haryana	IND	
	Houzz	0.61	CA	USA	
Indoor Mapping	3vjia.com	0.12	Guangdong	CHN	
	Matterport	0.11	CA	USA	
	NavVis	0.05	Bayern	DEU	
IoT Home	Essential	0.33	CA	USA	
	Ring	0.21	CA	USA	
	Tuya	0.20	Zhejiang	CHN	
Life, Prop. & Casualty Insurance	Zhong An	0.94	Shanghai	CHN	
	Ironshore Insurance	0.76	GA	USA	
	PolicyBazaar	0.50	Haryana	IND	
Long-Term Rentals/Sale Search	Lianjia	1.41	Beijing	CHN	
	Ziroom	1.12	Beijing	CHN	
	Mofang Gongyu	0.65	Shanghai	CHN	
Portfolio Management	LendInvest	0.99	England	GBR	
	EasyKnock	0.32	New York	USA	
	Better.com	0.21	New York	USA	
Property Management	Ke.com	1.20	Beijing	CHN	
	58fangdai	0.16	Jiangsu	CHN	
	Evolve Vac. Rental Network	0.10	CO	USA	
Real Estate Agent Tools	Ribbon	0.23	New York	USA	
	HomeLight	0.16	CA	USA	
	YOPA	0.10	England	GBR	
Short-Term Rental/Vac. Search	Airbnb	4.40	CA	USA	
	OYO	3.23	Haryana	IND	
	Tujia	0.76	Beijing	CHN	

Funding structure of PropTech companies

It was the year 2014 when investment in PropTech companies shot up. After a plateau for many years, a sudden surge in investment occurred, primarily made up of funds raised through private equity.

For the next two years, from 2014-2016, the level of investment in the PropTech market remained consistent. However, another spike in 2017 rocketed the growth of PropTech investment exponentially. 2017 experienced significant growth in investment, thanks to Series G funding and **2017 set the record for the year with the highest investment in PropTech, reaching almost $41.9 Billion.** Investment remained at a similar level in 2018 and funds raised somewhat evenly among the major funding types. See Figure 7 for a visual representation of the growth in PropTech investment by funding type over the years.

Figure 7: Evolution of investment Type in PropTech
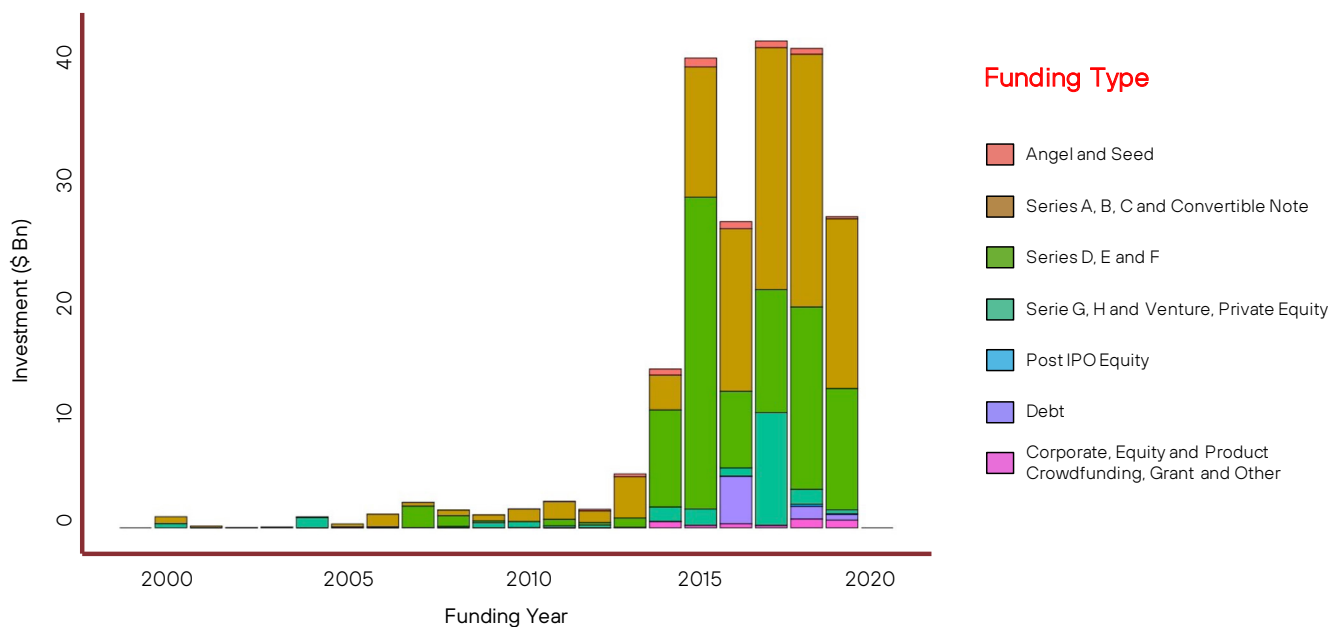
Funding structure of PropTech companies

Figure 8 depicts the volume of funds raised during the lifespan of PropTech companies and identify the funding types used. As expected, the first year experiences the highest investment amount because a significant amount of investment is needed during a company's growth period. This amount drops off every year, except in the sixth year when a large portion of PropTech companies decide to undertake Initial Public Offerings (IPOs). **After this sixth year, investment in a PropTech company decreases sharply to around $1 Million, on average. This is because companies that have survived for more than six years tend to be well-established, well-reputed, and financially stable.** Therefore, such companies typically do not need large sums of money right after the IPO. It is important to note that given the recent upsurge in the number of new PropTech companies and the recent spike in investment within this sector, this graph will change to better represent the investment activity in a PropTech company.

Figure 8: Investment in PropTech Companies over Lifespan
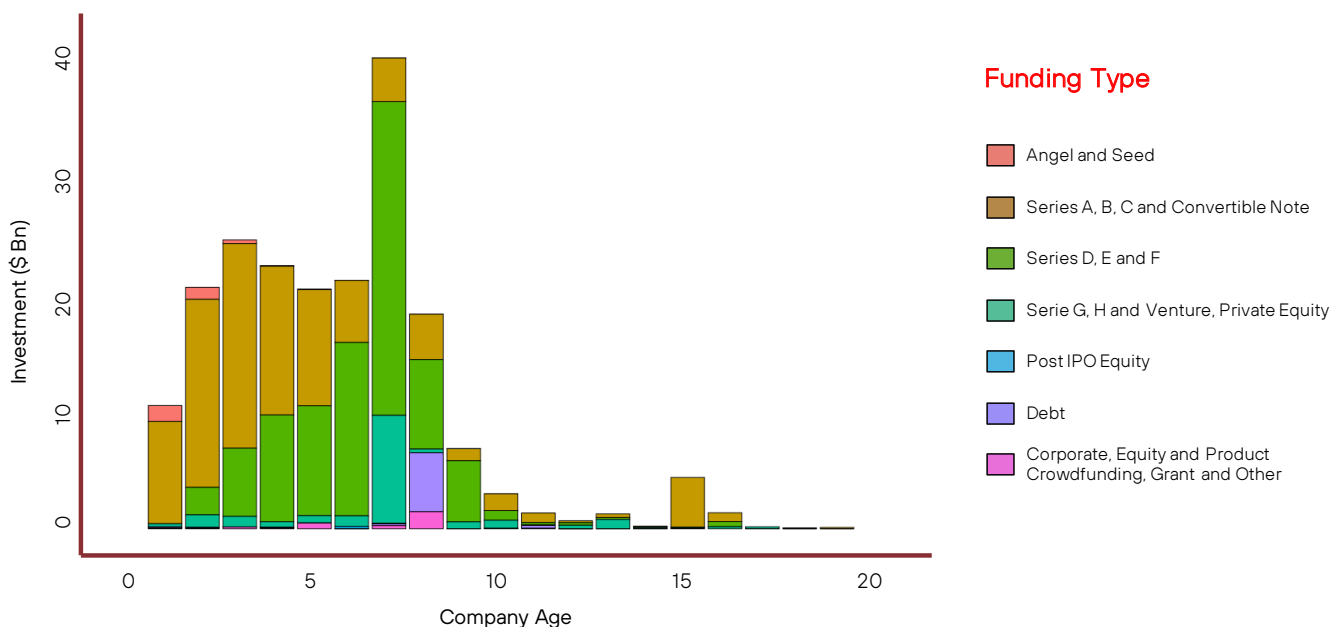
# 3,118 investors worldwide mainly from the US

The USA is the country with the highest number of investors, followed by the EU and the UK. Just as 60% of PropTech companies are from America, 60% of all PropTech investors have invested in the USA. China has the highest proportion of large investors, and the rest of the world ('Other') has the lowest.

Figure 9: Total number of investors per country (region)
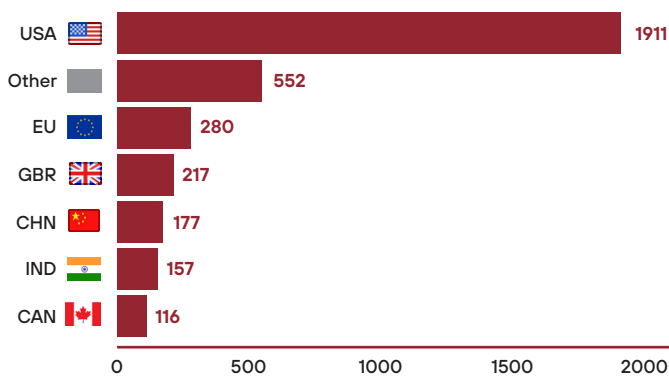
The category with the highest number of investors is IoT Home followed closely by Home Services. In contrast, the category with the least number of investors is Indoor Mapping, which is also the category with the least amount of funds raised.

Figure 10: Total number of investors per category
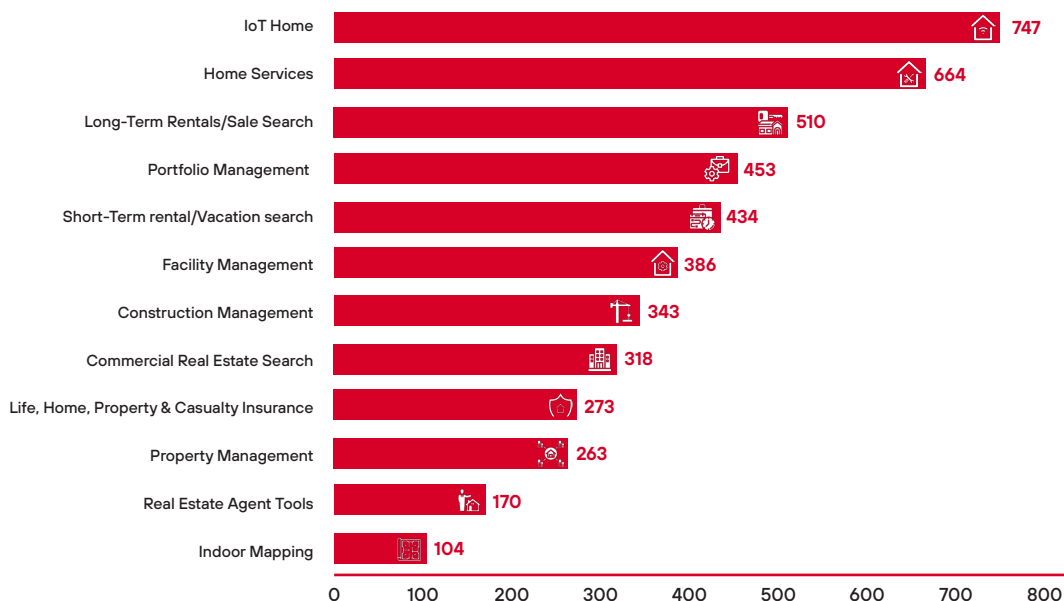
PropTech Investors

Figure 11 reveals that the larger the investor, the greater the number of different PropTech companies it invests in. These influential companies have the liberty to reduce their investment risks by diversifying their investment portfolio across many companies. Smaller investment companies with fewer available funds tend to invest proportionally higher amounts in a smaller number of PropTech companies to keep their profit margins high. As a result, these smaller investors have a less diversified portfolio. Therefore, they take bigger risks to keep up with the larger PropTech investors.

Figure 11: relationship between investor size[3] and the average number of PropTech companies in which they invest

Size of investor (by decile)
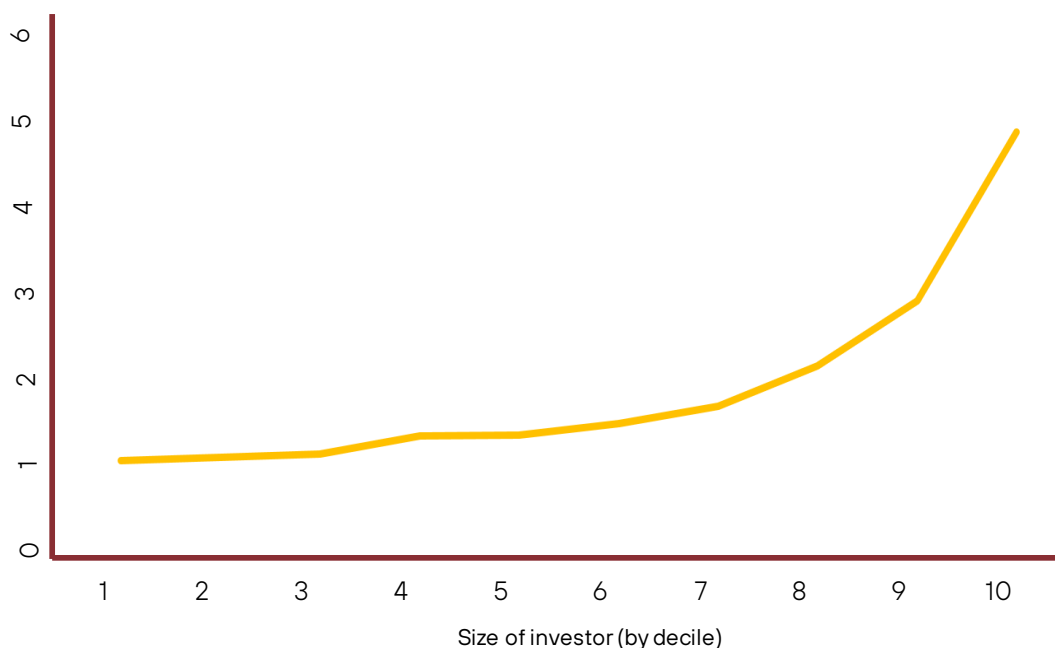
[3] Investor size is defined a normalized to be between 1 and 10 based on which decile the investor's investment falls in: an investor with a size of 1 means he is in the first decile and that at least 10% of the investors have smaller investments than this investor.

Focus on the US PropTech Industry

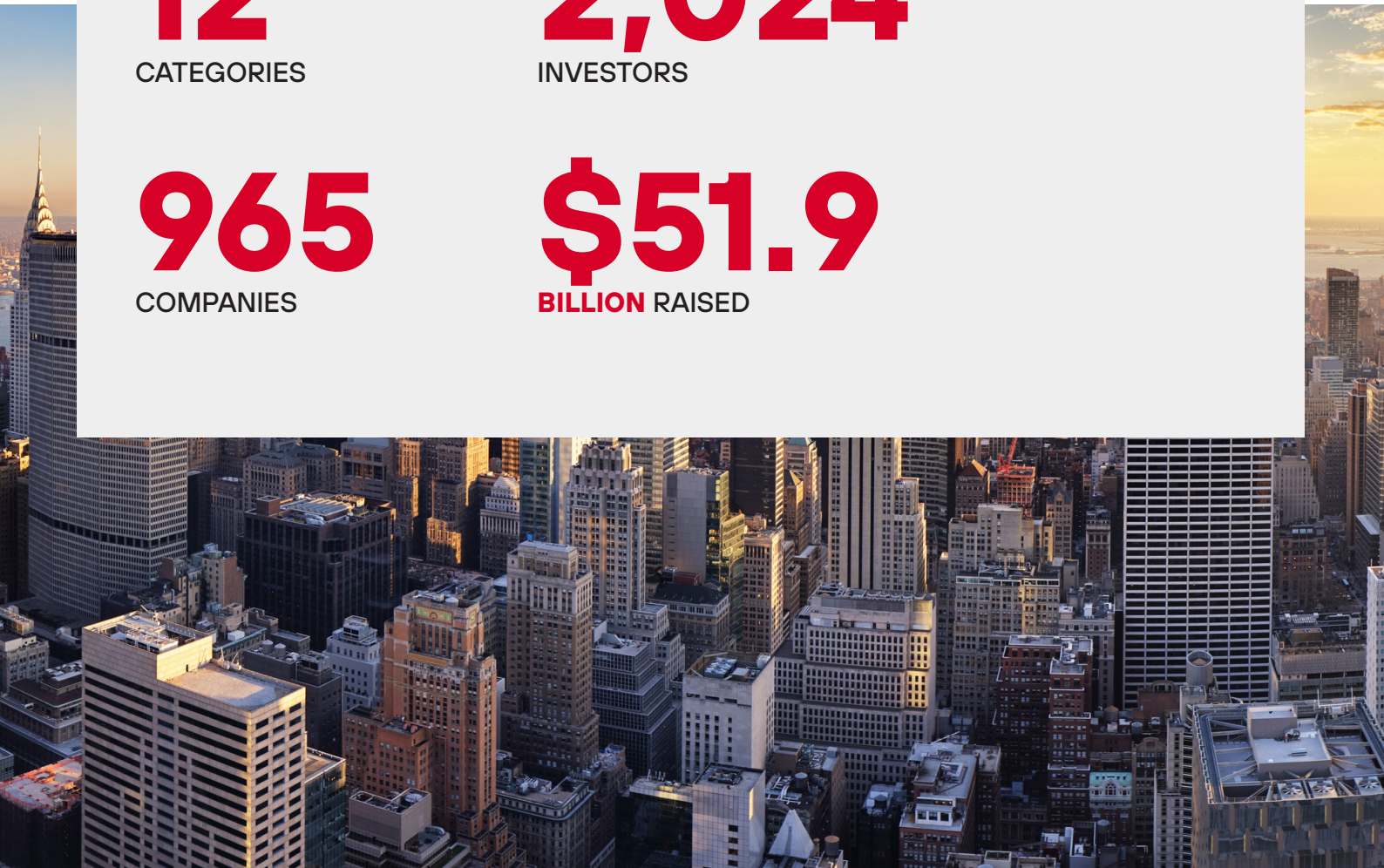## An increasing number of American PropTech companies

The PropTech sector in the United States is the largest PropTech market in the world, accounting for 58% of the world's companies and 62% of all PropTech investment. Unsurprisingly, the global trend of PropTech companies is mainly driven by the US. Because of this mammoth size of the US PropTech market, we dedicate a separate section to this country. In the following section, we will review figures again but then for the rest of the world and show trends in relative terms by excluding the USA.

12
CATEGORIES

2,024
INVESTORS

965
COMPANIES

$51.9
BILLION RAISED

## An increasing number of American PropTech companies

Figure 12 demonstrates that the number of new US PropTech companies has been consistently increasing since the turn of the century and reached its highest figure in 2014 before experiencing an unprecedented decrease. Over time, the quality of these companies has consistently been medium to high, with the proportion of low-quality companies each year averaging at only 6%. See Figure 13

Figure 12: number of new US PropTech companies founded over time by quality* (1976-2019)
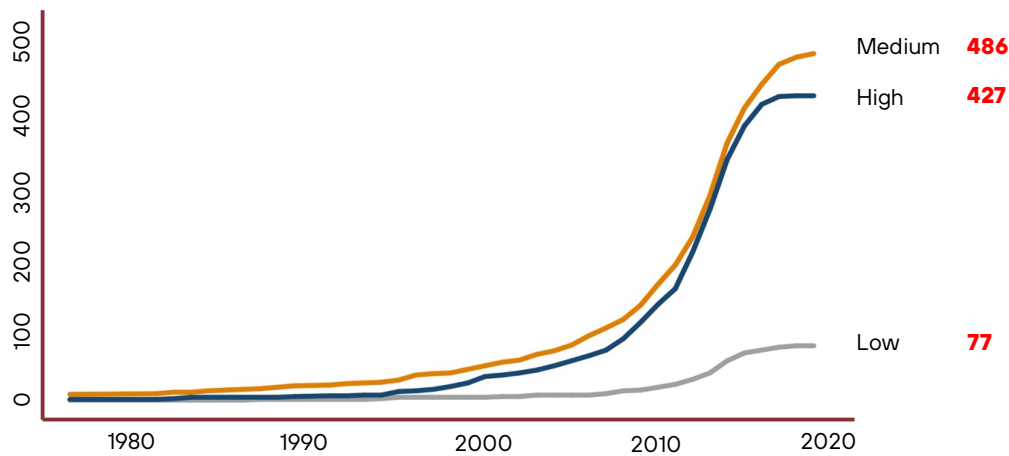

Note: The quality of a company is based on the assessment of their health, as measured by a variety of company metrics, such as funding, headcount, and founding date and is derived programmatically using Venture Scanner algorithms. Companies are scored relative to one another for the categories they are in.

Figure 13: Evolution of the Proportion of low, Medium and High Quality Companies (2000-2019)
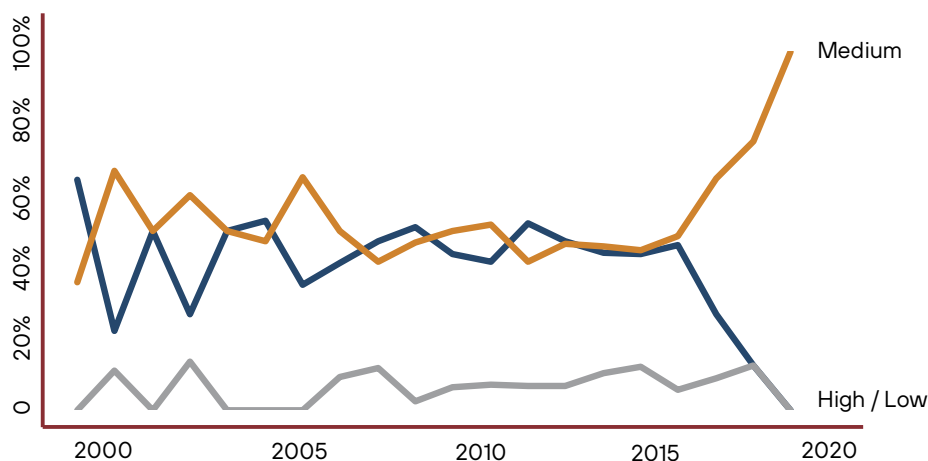
Despite the number of new PropTech companies slowing since 2014, PropTech investments remain very attractive to investors. The annual investment funds raised by US PropTech companies are nonetheless still experiencing an upward trend since 2013, showing that the interest in PropTech continues to thrive and spread among investors. See Figure 14

Figure 14: Total investment in US PropTech Companies Over Time
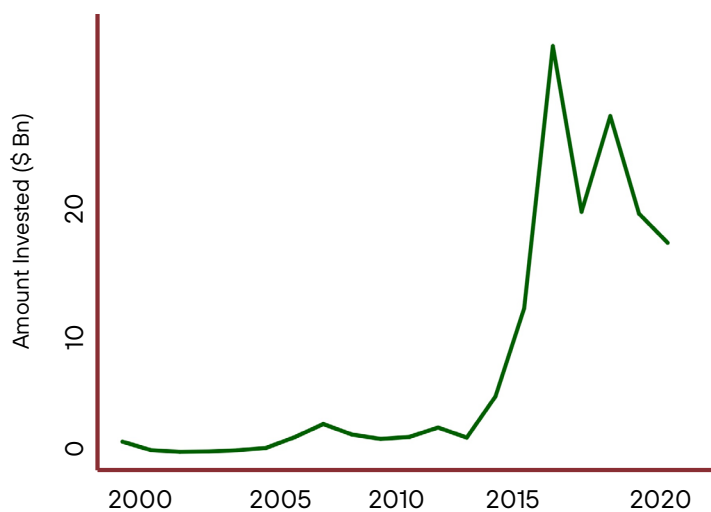
IoT Home is the leading category of US PropTech companies with 19% of the total number of US PropTech companies specialising in Internet of Home smart devices, followed by Portfolio Management and Home Services, each representing 13% and 10% of the market share respectively. See Figure 15

Figure 15: Distribution of US PropTech Companies by Category

19%
IoT Home

13%
Portfolio Management

10%
Property Management

Note: Other categories include: Short-Term Rental/Vacation Search, Commercial Real Estate Search and Indoor Mapping.

9%
Construction management

9%
Home Services

9%
Facility Management

9%
Other Categories

8%
Long-term Rental / Sale Search

7%
Commercial Real Estate

7%
Real Estate Agent Tools

7%
Life, Home, Property & Casualty Insurance
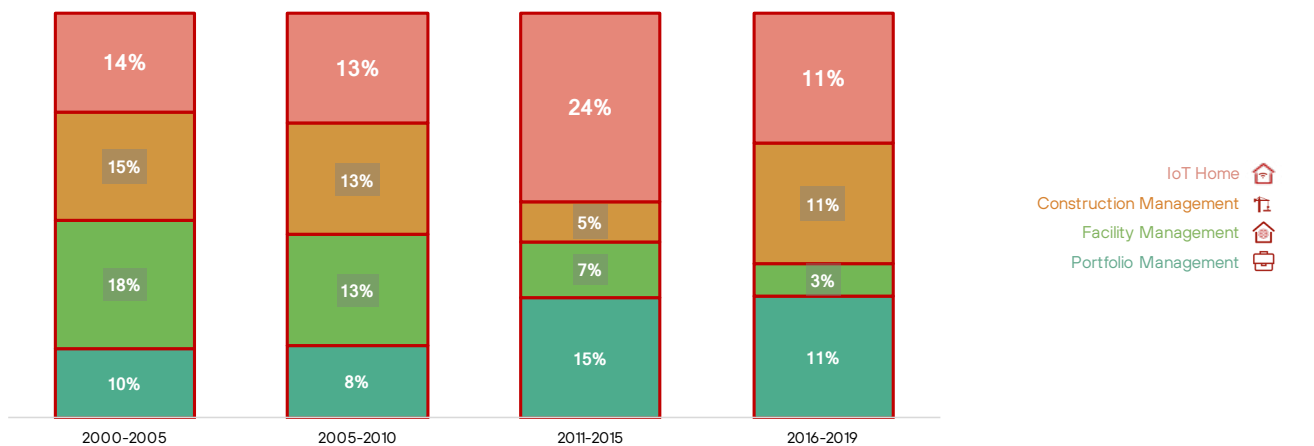
American PropTech companies per category

Figure 16 demonstrates that despite the consistent domination of the 4 PropTech categories IoT Home, Construction Management, Facility Management and Portfolio Management, in the recent years the market has experienced a shift towards Property Management, which in the 2016-2019 period has represented 13% of US PropTech companies. After IoT Home's peak in the 2011-2019 period, their market share has more than halved in the 2016-2019 period, dropping from 24% to 11%.

Figure 16: Changes in Composition of US PropTech Companies by Categories
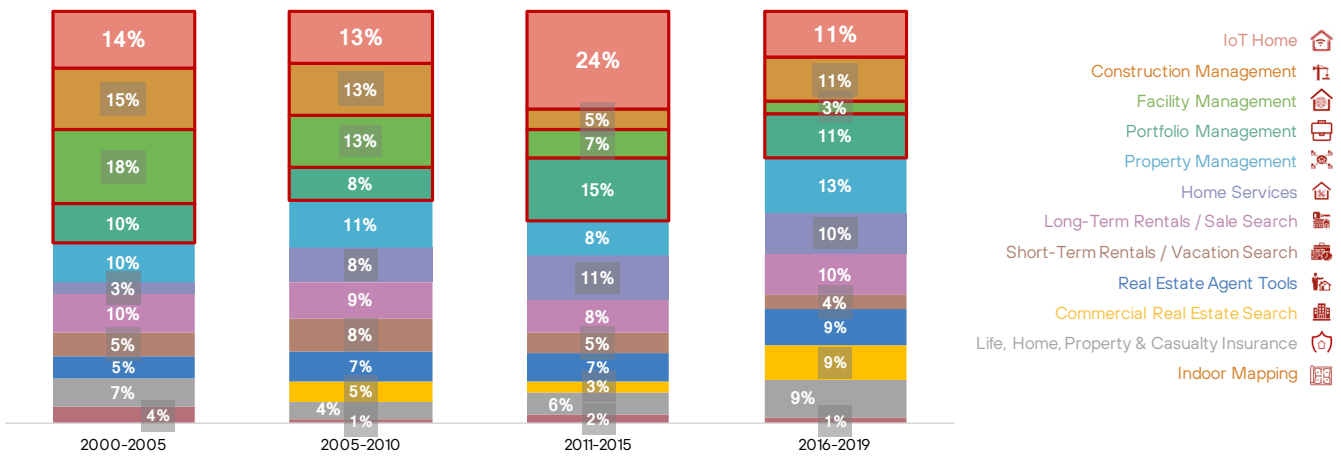
Focusing on the top 4 PropTech categories in Figure 17 further emphasises their decreasing domination in the US PropTech market, making room for other categories such as Property Management to excel. Due to this re-balancing of the proportion of US PropTech companies per category, the market is starting to become more evenly distributed and all 12 PropTech categories are looking attractive to potential investors.

Figure 17: Changes in Composition of US PropTech Companies in the top 4 Categories

American PropTech companies across the country

US PropTech companies are located across 41 states. From 2000-2005 the distribution of PropTech companies in the US was relatively even across the US. **However, over time the two states that have witnessed a spike in numbers of PropTech companies are California and New York.**

California's numbers notably shot up in 2010. By 2015 New York made a huge leap in the figures. However, it now appears that other states have caught on to the PropTech boom as the state of Texas has recently experienced an enormous surge in their numbers, bringing them close to New York who seems to be slowing down. California nonetheless remains far ahead with 423 PropTech companies in 2019. See Figure 18

Figure 18: Evolution of the Number of PropTech Companies over Time in United States
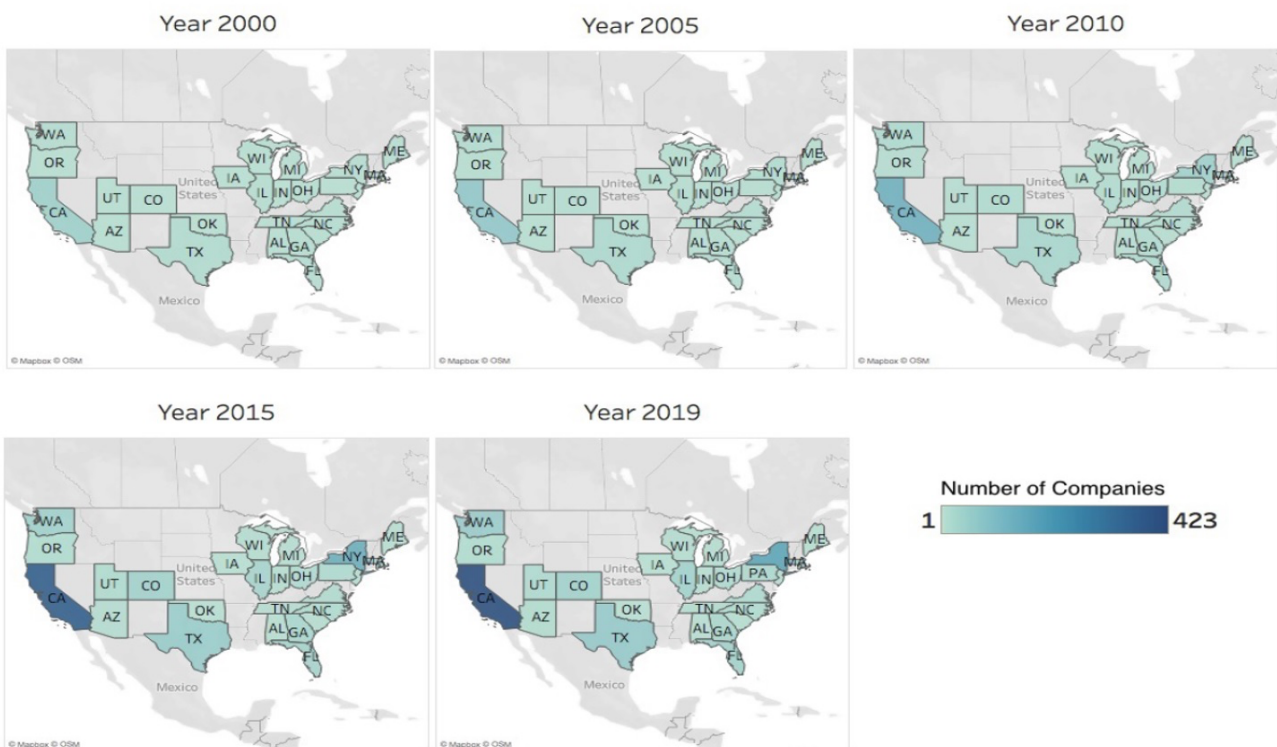
Investment: an industry dominated by a few companies

From 2000 to 2019, the total investment volume in the US has increased by 2,932%, from $895 Million to $27.1 Billion. The Top 10 US PropTech companies have raised in total $36.3 Billion, with The We Company responsible for 62% of that. These 10 companies have raised 55% of the total investment funds raised by all US PropTech companies.
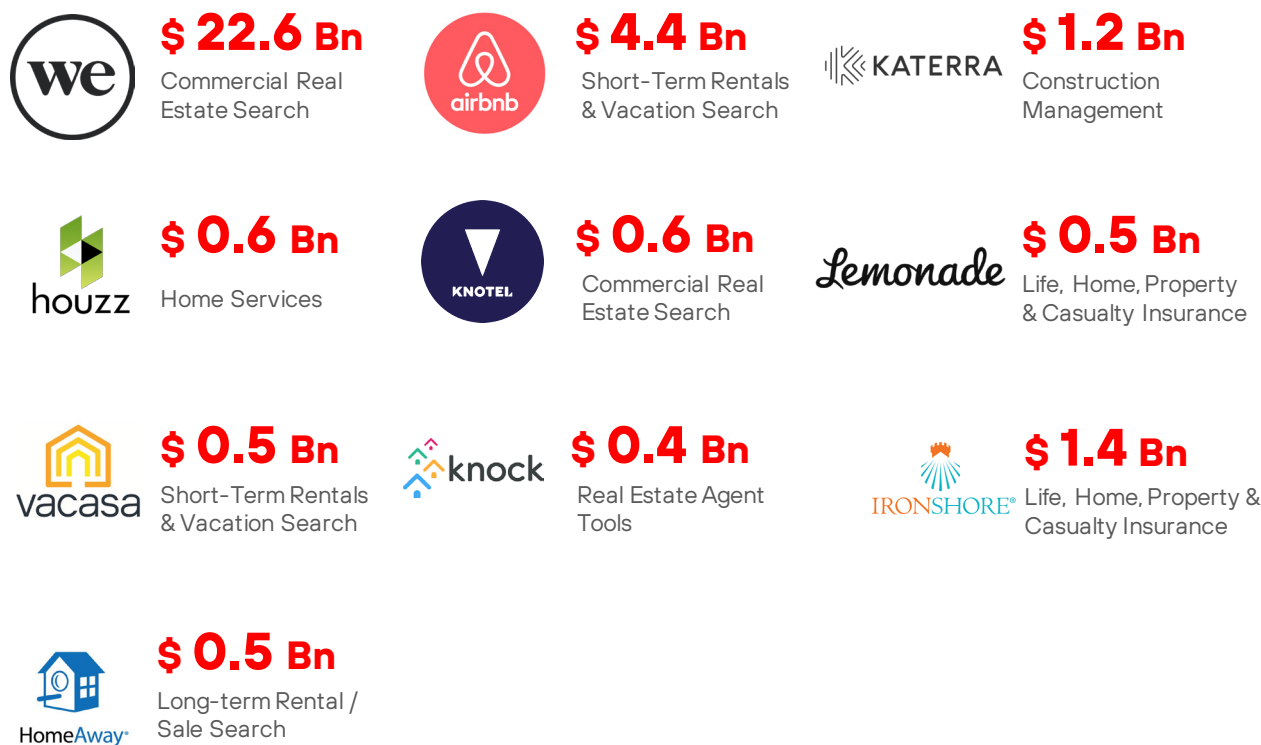

Table 3: Top 10 US PropTech Companies

	Companies	State	Amount Raised ($ Billion)	Investor Count
1	The We Company	New York	22.55	26
2	Airbnb	California	4.40	62
3	Katerra	California	1.24	12
4	Ironshore Insurance	Georgia	0.76	3
5	Houzz	California	0.61	20
6	Knotel	New York	0.56	26
7	Vacasa	Oregon	0.52	13
8	HomeAway	Texas	0.51	14
9	Lemonade	New York	0.48	31
10	Knock	New York	0.43	21

Investment: an industry dominated by a few companies

Of the top 10 US PropTech companies (Figure 19 and Table 3) all were founded in the 21st century, bar Vivint Smart Home, showing that these are all companies that have evolved at the same time and at the same speed as the digital evolution and have been able to capitalise on the growing number of technologies and tools accessible to them

With regards to their geographical location, **8 out of the top 10 PropTech companies are from either California (6) or New York (2)**, with the other two coming from Utah and Georgia. Clearly, PropTech companies founded in these two American PropTech hotspots have a better chance of growing given the close proximity to investors. Of these ten companies, Airbnb has the most investors with 47, and Ironshore Insurance has the least with 3 – the average number standing at 19 investors.

Figure 19: Investments in Top US PropTech Companies

we — **$ 22.6 Bn** Commercial Real Estate Search	**airbnb** — **$ 4.4 Bn** Short-Term Rentals & Vacation Search	**KATERRA** — **$ 1.2 Bn** Construction Management
houzz — **$ 0.6 Bn** Home Services	**KNOTEL** — **$ 0.6 Bn** Commercial Real Estate Search	**Lemonade** — **$ 0.5 Bn** Life, Home, Property & Casualty Insurance
vacasa — **$ 0.5 Bn** Short-Term Rentals & Vacation Search	**knock** — **$ 0.4 Bn** Real Estate Agent Tools	**IRONSHORE®** — **$ 1.4 Bn** Life, Home, Property & Casualty Insurance
HomeAway® — **$ 0.5 Bn** Long-term Rental / Sale Search		

Investment per category and company

Of the 12 categories, Commercial Real Estate Search is the US PropTech category with the highest amount of investment funds raised, primarily due to We Company that dwarfes all other companies. The smallest category on the other hand is Indoor Mapping which has both a small number of US PropTech companies as well as a small number of investment funds raised. See Figure 20

Figure 20: Distribution of Investments by Company & Category
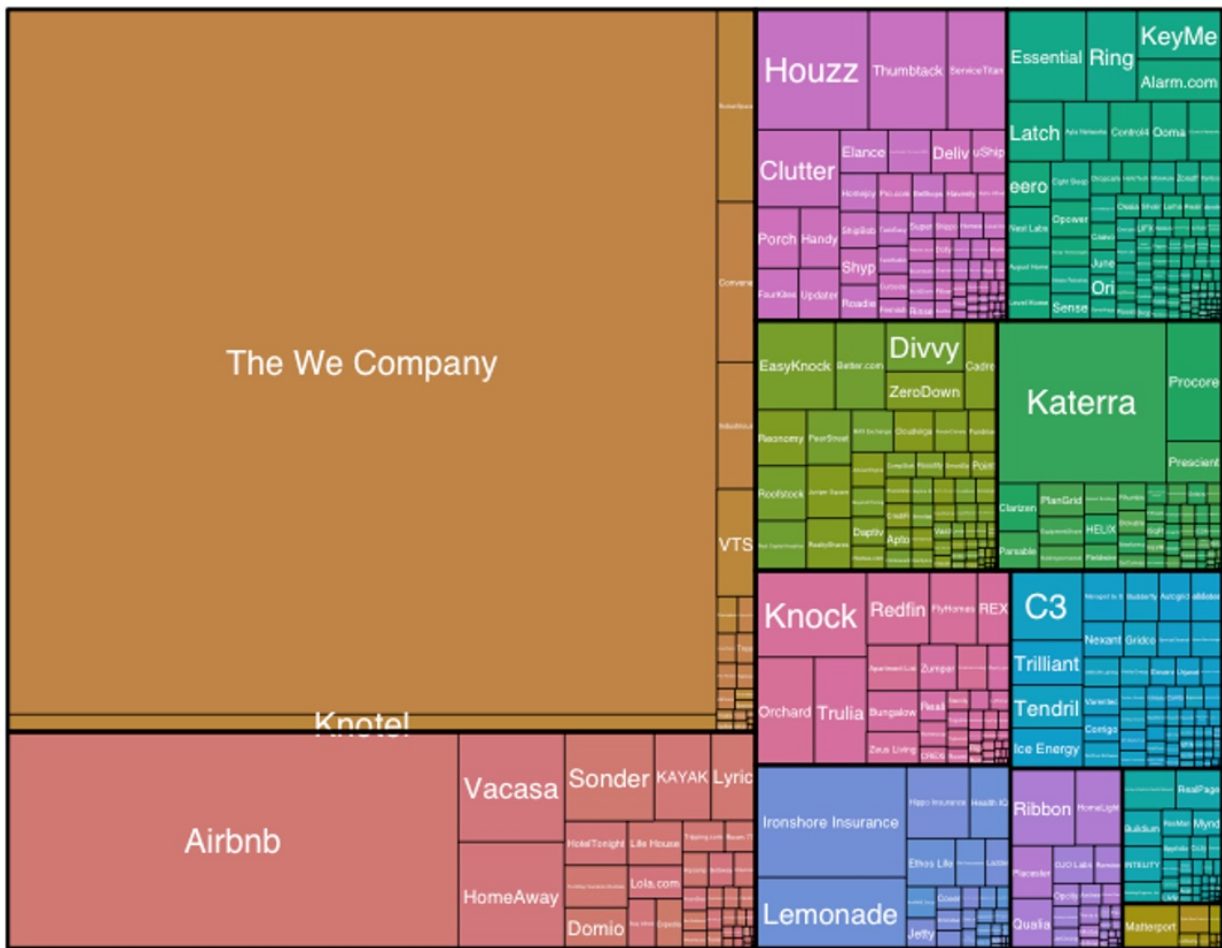
■ Commercial Real Estate Search	■ Home Services	■ IoT Home	■ Real Estate Agent Tools
■ Short-Term Rentals / Vacation Search	■ Portfolio Management	■ Construction Management	■ Property Management
■ Long-Term Rentals / Sale Search	■ Facility Management		■ Indoor Mapping
■ Life, Home, Property & Casualty Insurance			

Funding structure of American PropTech companies

The total funding in the US PropTech market has exponentially increased over time (Figure 21). By categorising the funding into 21 different sources, we can see that Series financing is the funding type that has contributed the most to the PropTech market.

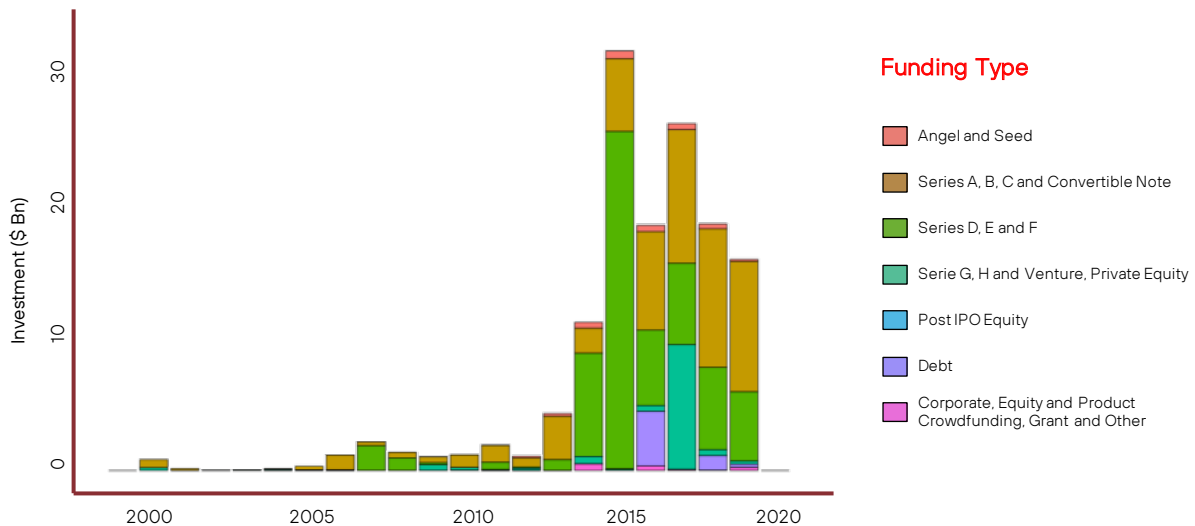**Figure 21: Investment by Funding Type over Time**

Figure 22 reveals which funding types are employed at different periods of the companies' growth. Clearly, traditional start-up financing methods are employed in the early years of companies' existence, such as Seed and Series A-D financing. Meanwhile, companies tend to employ Debt financing once they have established themselves in the market for around 8 years, raising the highest volumes of investment funds. Further down the line, late Series H financing occurs round and about the 11th year mark, possibly due to mergers and acquisitions.

Figure 22: Investment by Funding Type over Company Age
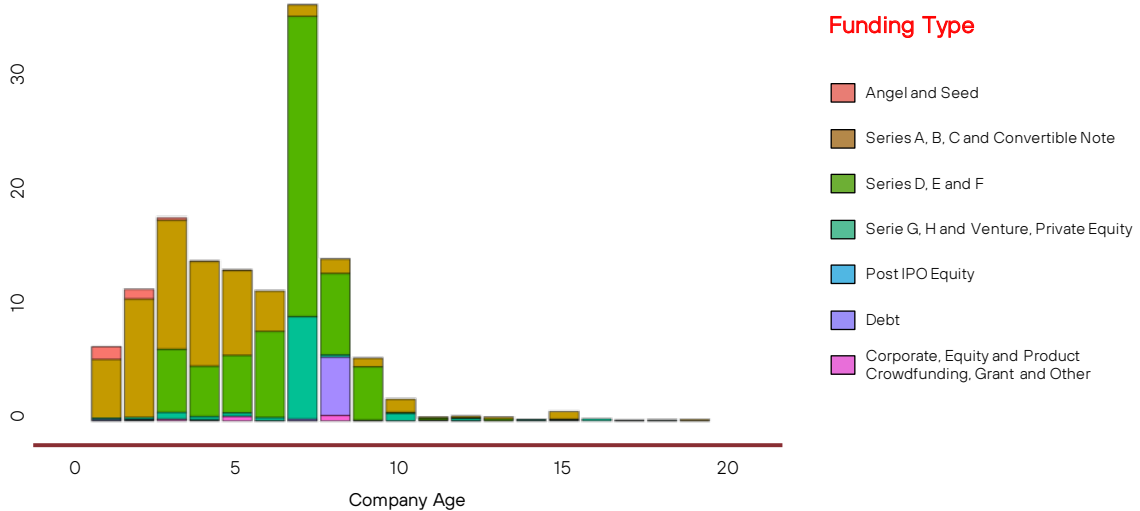
California: the financial heart of the American PropTech industry

In correspondence to the high density of PropTech companies in California, New York and Texas, these three states have also raised the highest volume of investment funds. While only a small number of investors have targeted PropTech companies from Utah, this state nonetheless has one of the greatest ratios of large investors. See Figure 23

Figure 23: Distribution of Investors by State
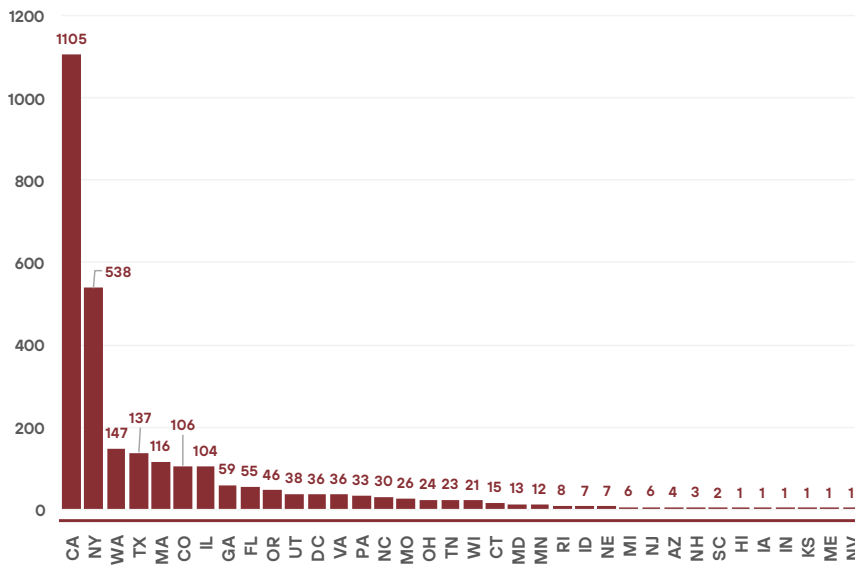
IoT Home and Home Services are the two categories with the highest number of investors. This comes as no surprise as IoT Home is the category with the largest number of US PropTech companies, and Home Services is third, just after Portfolio Management. See Figure 24

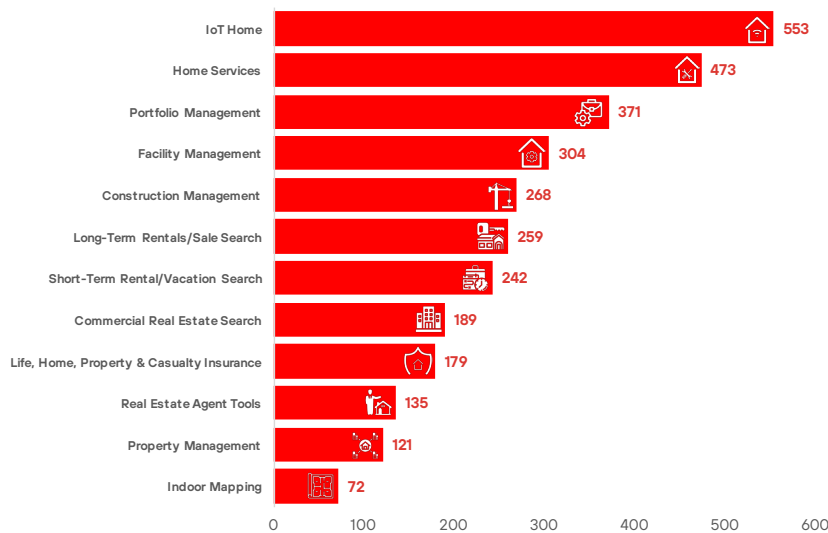**Figure 24: Distribution of Number of Investors by Category**

Table 4: Top 10 Investors in US PropTech Companies

Companies	Amount Invested ($Billion)
SoftBank Vision Fund	5.46
Hony Capital	5.09
Sequoia Capital	4.13
T. Rowe Price	3.33
Kleiner Perkins	2.39
Wellington Management	2.33
GGV Capital	2.25
Fidelity	2.21
Tiger Global Management	2.05
JP Morgan Chase	1.83

The category with the largest volume of investment is Short-Term Rental/Vacation Search, largely influenced by PropTech giant Airbnb and its 47 investors. The smallest is yet again Indoor Mapping.

While Figure 20 shows that a large amount of the investment funds are concentrated among a small number of PropTech companies (the top 10 US PropTech companies have raised more than half the total US investment funds), Figure 25 **reveals that each PropTech category benefits from a wide range of investors, none of which monopolize their category** (with the exception of the Commercial Real Estate Search category where Hony Capital and Softbank Vision Fund take up a large share of the investment funds raised). This resulting investor equilibrium allows for a balanced and stable market dynamic which will see the PropTech companies continue to raise funds and grow, as well as providing them with good security in the event of an unexpected crisis.

Figure 25: Distribution Investment Volume by Investors & Category
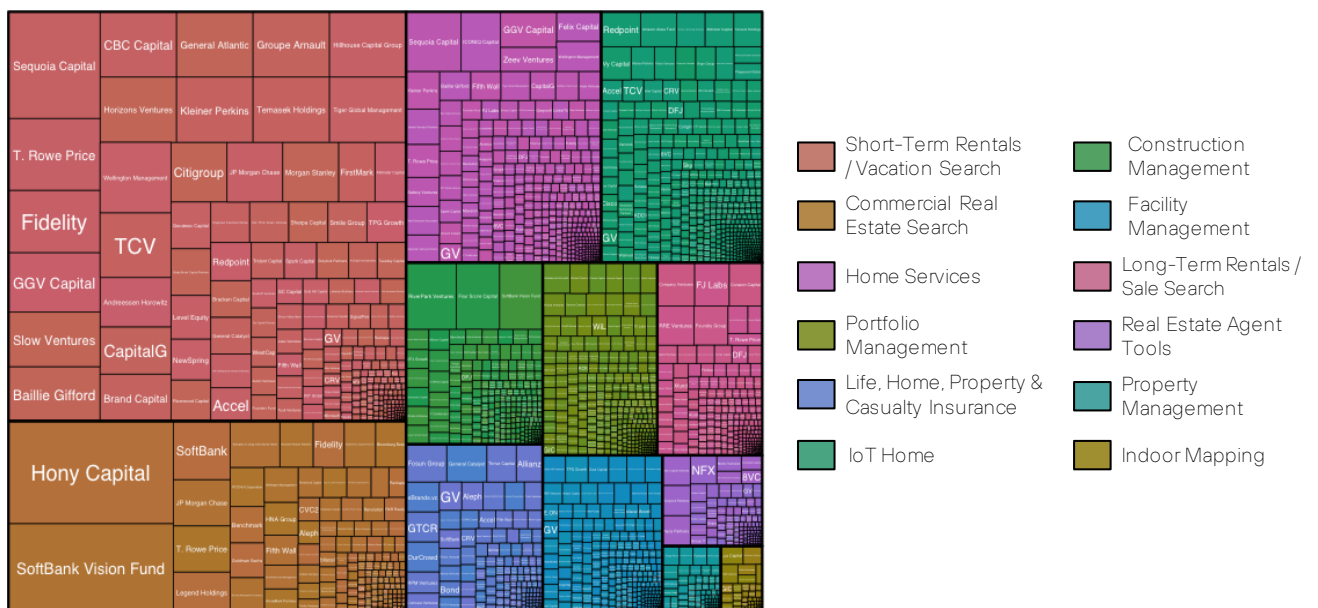
The PropTech Industry in the Rest of World

This section covers the PropTech industry of the rest of the world, excluding the United States. As noted earlier, the US is the largest market for PropTech industry accouting for approximately 58% of all PropTech companies. This section focuses on the remaining 52% of the firms, their investors and their investment patterns. These firms are spread all across the rest of the world, with some countries like United Kingdom, Germany, China, and India, leading the charge. Hence, the following figures and tables will focus exclusively on the PropTech industry outside the United States. It will provide a finer analysis where it can be observed that no one single market dominates the others to shift the focus of the analysis.

12
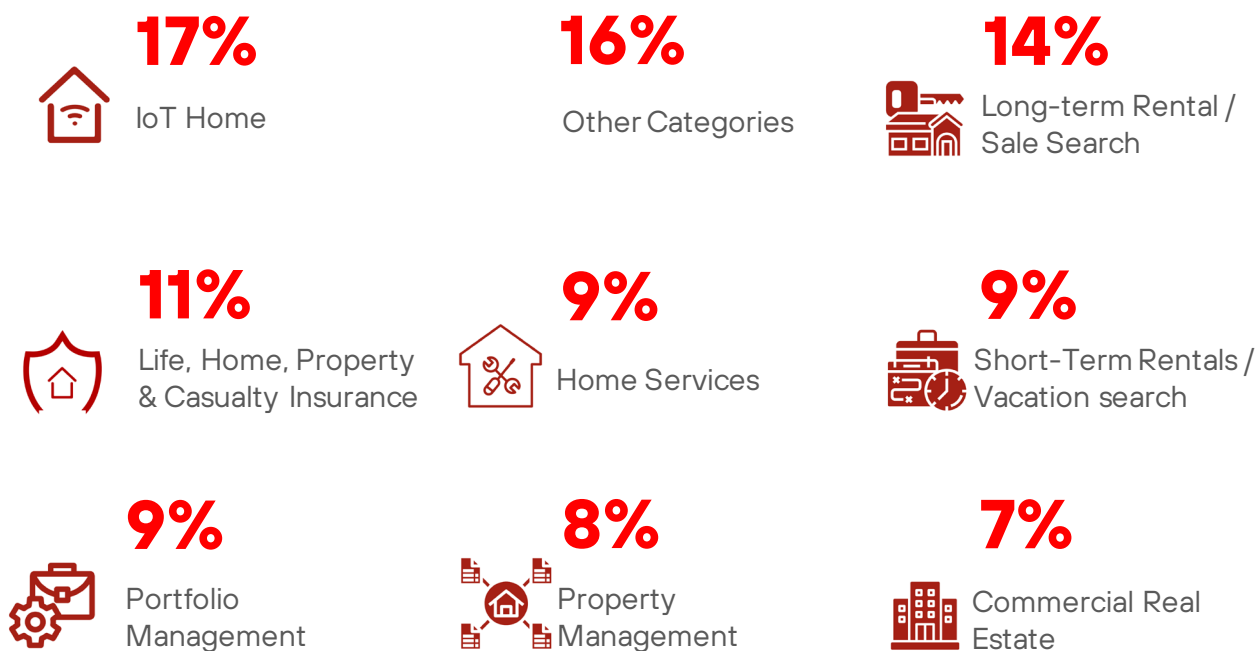CATEGORIES

761
COMPANIES

1,642
INVESTORS

$32.5
Billion RAISED
(2000-2019)

PropTech companies across western countries and emerging giants

To start with, Figure 26 shows the distribution of the categories of PropTech companies in the rest of world. **The Internet of Things (IoT) category is leading the pack with 16% of the companies, followed closely by Long-Term Sales or Sale Search category with 14% of the companies.** The rest of the companies are approximately evenly distributed among a handful of categories, where each category has somewhere between 7% and 11% of the companies. This composition shows a healthy diversity in the different sectors of the economy, highlighting the fact that the industry is large and has several potential areas that are just experiencing technological revolution. As we will see in the later parts of this section, investors acknowledge this diversity and hedge their investments across the different categories.

**Figure 26: Distribution of PropTech Companies by Category**

17% IoT Home

16% Other Categories

14% Long-term Rental / Sale Search

11% Life, Home, Property & Casualty Insurance

9% Home Services

9% Short-Term Rentals / Vacation search

9% Portfolio Management

8% Property Management

7% Commercial Real Estate

Note: Other categories include: Faclity Management, Construction Management, Real Estate Agent Tools, and Indoor Mapping.

Investment opportunities are concentrated in a few Indian and Chinese Proptech companies

Starting with investment made, first Figure 27 depicts the investment in each company and sector relative to other companies. It is clear that the two major categories here again are Long Term Rentals or Sales Search, and Home Services. Companies categorized as Real Estate Agent Tools and Commercial Real Estate Search also attract significant amounts of investment.

If you look at the distribution of investment across companies within a category, we see that within the Long Term Rentals or Sales Search, the investment is concentrated among a few top companies, namely Oyo, Tujia, Xiaozhu.com, and Klook. This kind of concentration is also represented in the few smaller categories of Property Management, Portfolio Management, and Life, Home, Property and Casualty Insurance. The biggest category here, namely Home Services, and a couple of medium sized ones, exhibit a more uniform distribution of investment funds within the category.

**Figure 27: Distribution of Investments by Company & Category**
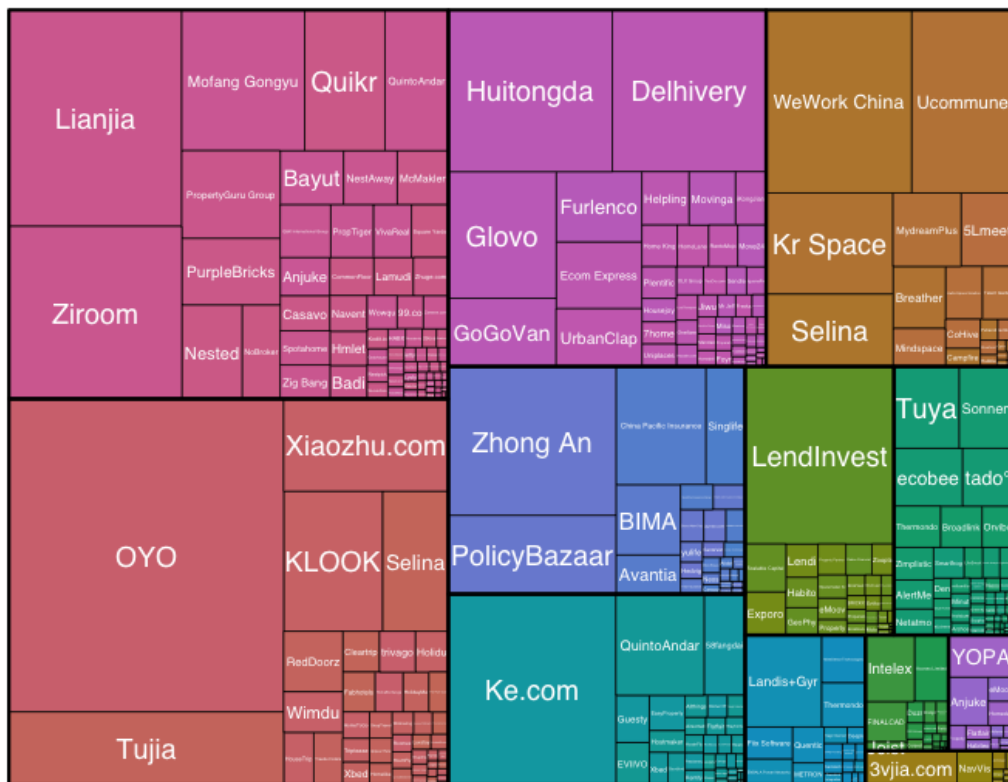
Funding structure of non-US PropTech companies

Figure 28 presents the breakdown of the investment by the funding type over the years in PropTech companies. The first thing to notice here is that the **investment levels experienced sharp increases starting in the year 2014**. The second thing to notice in this figure is that there are many different types of investment received by these firms and they vary significantly in nature. For example, there are Angel investments, grants, equity, venture capital investment, Series A to H, and also debt. As for the trends, in Figure 28 one can observe that early in 2014 and 2015, Series A, Series B, Seed and Angel made up most of the investment.

However, as years went by, the trust of investors built up and this was represented in senior Series like C, D and E, along with private equity, came in to the mix. This trend is indicative of investor sentiment developing from cautious to confident. **The dominance of senior series is also indicative of the very important underlying fact that the companies that received Series A and Series B were able to achieve their growth targets to become eligible to receive the senior series investment like Series C, D, and E.** Hence, these investment trends signify that many PropTech firms were been successful in achieving their growth targets in terms of revenue and profitability in a manner that demonstrated to the investors that there is significant potential in these companies to address the needs of the market. This also demonstrates that the PropTech industry is growing across the world, not just in the United States, and also gaining investor confidence.

Figure 28: Investment by Funding Type over Time
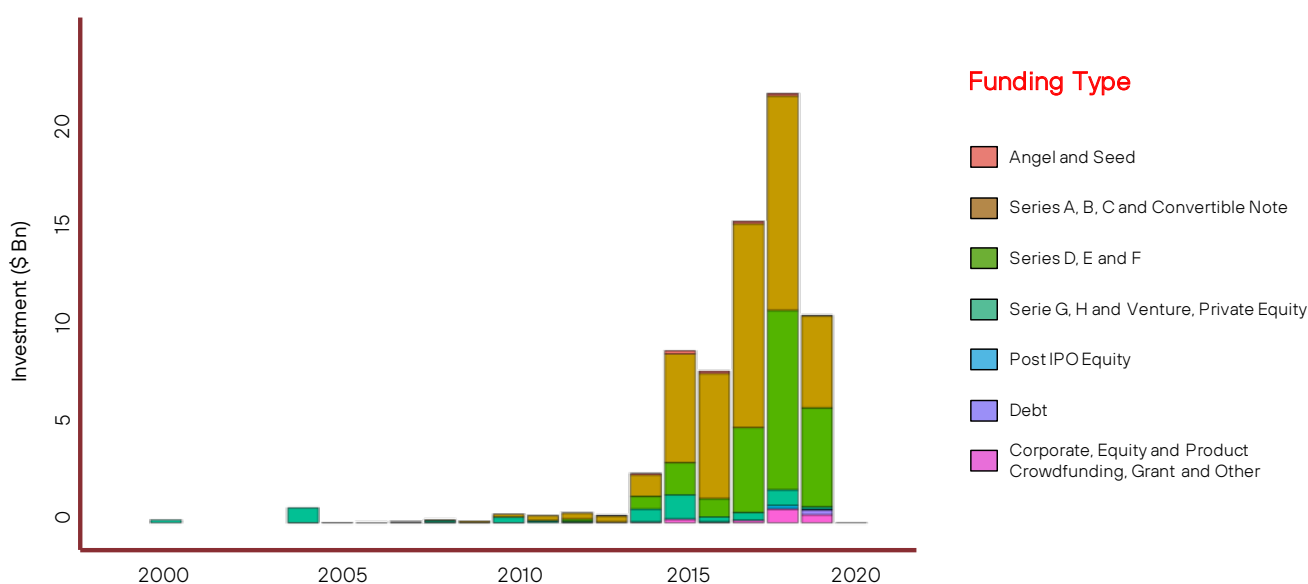
Funding structure of non-US PropTech companies

A related but different angle of this story is depicted in Figure 29 where you see how the type of funding changed with the company age. It shows that when a company is in the early days of operation, it is looking for investors, so it is able to get mostly seed money, angle investment and Series A or B. As the company ages and is able to demonstrate its success to the market and investors, the company attracts other forms of investment in the form of Series C, D, and E, along with private equity and post-IPO equity, if the company decides to go public.

Figure 29: Investment by Funding Type over Company Age
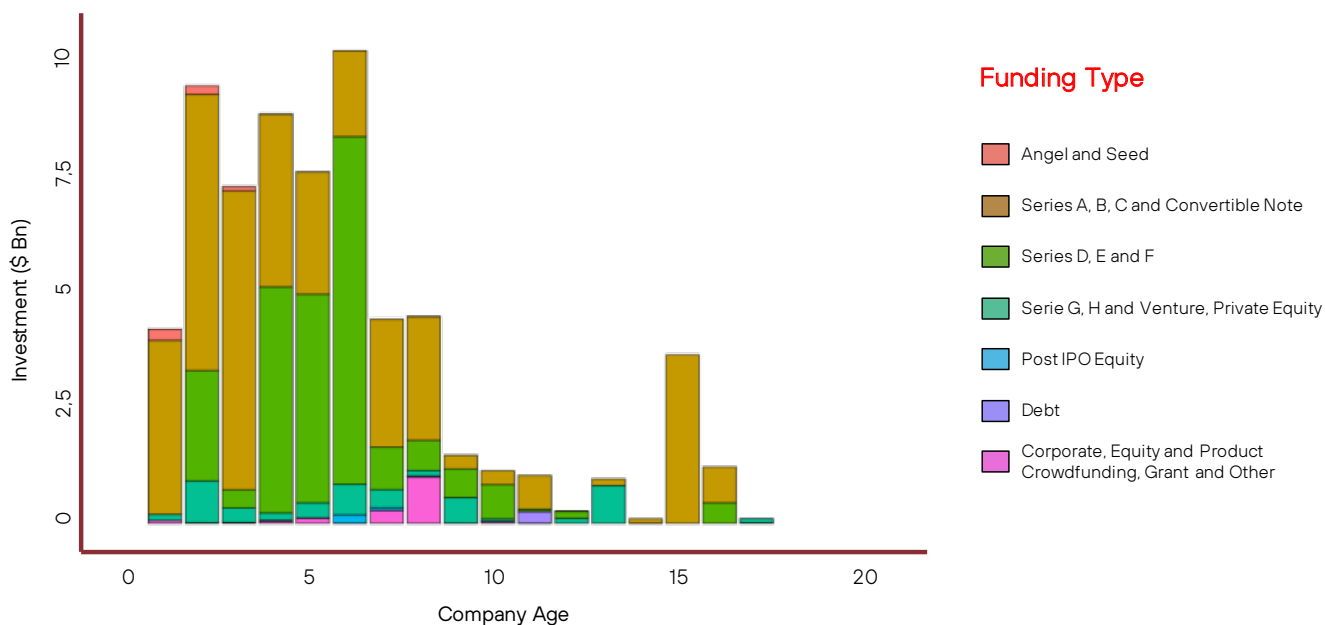
## Most investors are from Europe, India and China

Figure 30 shows the distribution of number of investors in each major country, other than United States. **The two biggest markets in this figure are from Europe, namely United Kingdom in the first position followed by Germany in the second.** Perhaps, not surprisingly, the third and fourth positions are grabbed by India and China, respectively, both of which are the two Asian giant economies comprising the BRIC (Brazil, Russia, China, and India). It is encouraging to see these countries boast 170 to 220 investors each, indicating significant investor interest from these markets.

Figure 30: Number of Investors by Country
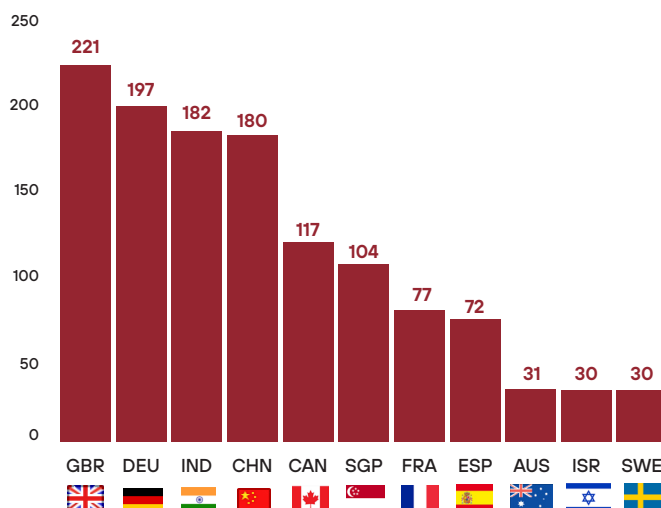
Following up on the distribution of investors across countries, we explore the distribution of investors across the different PropTech sectors, as shown in Figure 31. Here we see that Long-term rentals and sales search is leading the way with the most number of investors, followed by Home Services, Internet of Thing (IoT) and Short-term rentals or vacation search. **Clearly, PropTech companies that facilitate the search of properties either for short vacation, long term rental or even sale, are of prime interest for investors, in terms of the number of different investors.** In this regard, Commercial Real Estate Search has also attracted a significant number of investors.

Figure 31: Number of Investors by Category
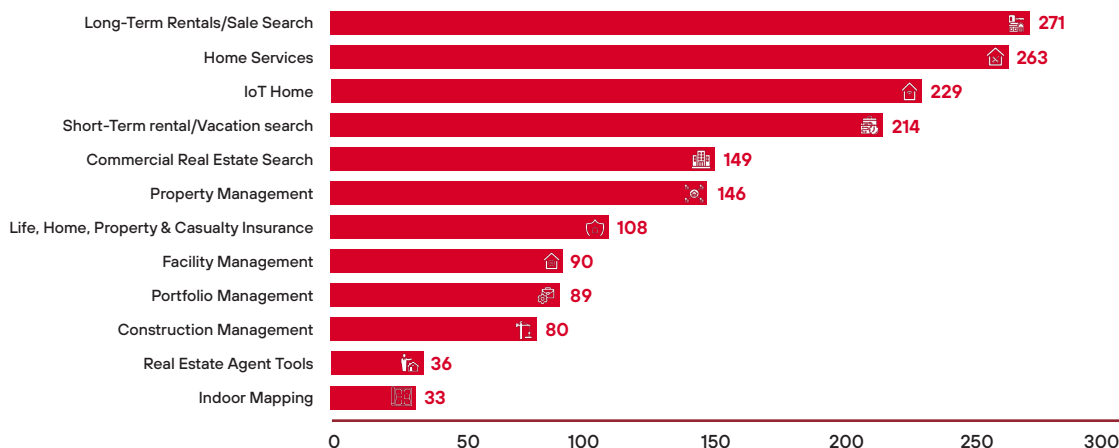
Top Investors

The investment amount of the top ten investors are presented in Table 5. Similar to the case of United States, **the biggest investor is SoftBank Vision fund with $2.77 Billion invested across various PropTech firms in different categories. Tencent Holdings is close behind with $2.52 Billion of investment.**

After that, the investments of the remaining 8 have investment levels between $1 Billion and $1.8 Billion, which is a fairly uniform distribution. This shows that these investors have similar sized total amounts invested in the whole PropTech industry, with little variation. This pattern is consistent with the one in Figure 32, which showed that the investments of different investors were evenly distributed across PropTech firms and categories.

These patterns also illustrate that the PropTech industry is relatively young but attractive to investors. In the future, we expect these investment levels to grow as more firms enter the market, and existing firms grow in the industry, requiring further investments to expand their operations. We also expect that as firms mature, the uniform distribution may skew, to some extent, in favor of a subset of firms which demonstrate success and good returns for investors.

Table 5: Top 10 Investors

Investor	Amount Invested ($Billion)
SoftBank Vision Fund	2.77
Tencent Holdings	2.52
Sequoia Capital China	1.78
Sequoia Capital India	1.5
Lightspeed Venture Partners	1.35
Wellington Mgt.	1.3
Hillhouse Capital Group	1.11
CDH Investments	1.09
Tiger Global Mgt.	1.04
IDG Capital	1.01

Investment Strategy

Looking at the investments made by each investor in each category, we can see a much more uniform pattern in Figure 32. This shows that **most investors prefer to hold diversified portfolios**, so that the risk levels do not increase with investments size. Even the biggest investor, Soft Bank Vision Fund, has several small positions across the many different categories. No single category is dominated by a few big investors. There are a couple of Notable Exceptions, like Tencent Holdings, which has the largest investment shares in both the Long-Term Rentals or Sales Search, as well as in the Property Management category. But here the largest shares even here represent a less than 10% of the total investment within these categories.

This figure clarifies the position of investors about investing across all categories of the PropTech industry and not focusing on a few top ones. Also, no single category is dominated by a small number of investors.

Figure 32: Distribution of the Investment Volume by Investors & Category
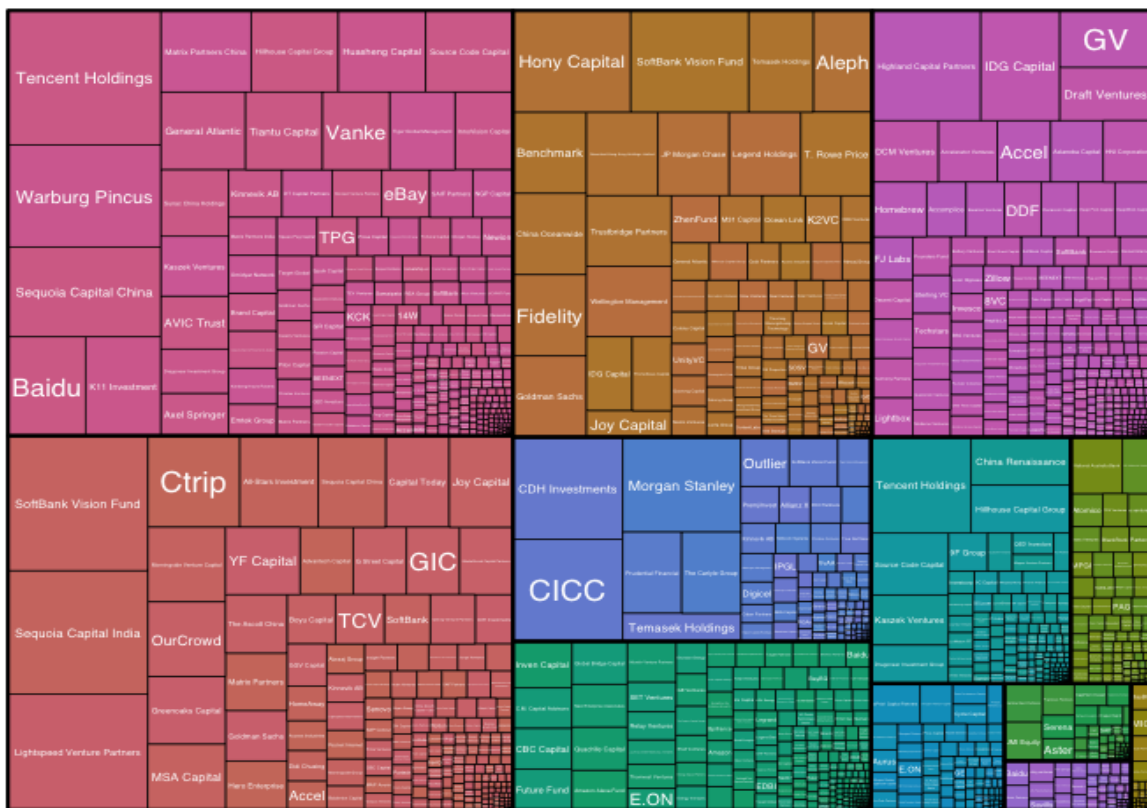
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