

**THE
WEALTH
REPORT**

The *global* perspective on
prime property & investment

16th edition — 2022



16th edition

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Definitions and data

HNWI

High-net-worth individual – someone with a net worth of US\$1 million or more, including their primary residence.

UHNWI

Ultra-high-net-worth individual – someone with a net worth of US\$30 million or more, including their primary residence.

Prime property

The most desirable and most expensive property in a given location, generally defined as the top 5% of each market by value. Prime markets often have a significant international bias in terms of buyer profile.

The PIRI 100 – Now in its 15th year, the Knight Frank Prime International Residential Index tracks movements in luxury prices across the world's top residential markets. The index, compiled using data from our research teams around the world, covers major financial centres, gateway cities and second-home hotspots – both coastal and rural – as well as leading luxury ski resorts.

The Knight Frank Wealth Sizing Model – The model, created by our data engineering team, measures the size of HNWI, UHNWI and billionaire cohorts in more than 200 countries and territories. In addition, we model the number of HNWIs and UHNWIs at city level for 100 global cities.



The Attitudes Survey – The 2022 instalment is based on responses provided during October and November 2021 by more than 600 private bankers, wealth advisors, intermediaries and family offices who between them manage over US\$3.5 trillion of wealth for UHNWI clients. Special thanks to Absa Kenya, Alfa Bank, Ambit Finance, ANZ Bank Australia, ANZ Bank New Zealand, BritishAmerican Business, Caleo Capital, CIC Insurance, Credit Suisse, Dry Associates, Edelweiss, Forsyth Barr New Zealand, Genghis Capital Ltd, HSBC Singapore, ICEA Lion, ICICI Bank, JB Were, Julius Baer, Kairos Capital Pte Ltd, Kathrein Privatbank, Komerční Banka, Macquarie Bank, Maybank Philippines Inc, MERITZ Securities Co Ltd, Motilal Oswal, Nabo Capital, National Australia Bank, NCBA Group, NH Investment & Securities Co Ltd, Ruffer LLP, Sanlam Kenya, SK Securities Co Ltd, Stanbic Bank Kenya, Sumitomo Mitsui Trust Bank Ltd, UOB Private Bank, Walsh Bay Partners and Westpac for their participation.

How we chose our cover



The world is still enduring a period of significant disruption, so more than ever this year's edition of *The Wealth Report* needed to cut through the confusion and offer clarity. Reflecting this, our cover concept builds on the notion of chaos and noise coming together seamlessly. We drew inspiration from nature – notably how starlings move together en masse in a murmuration creating wonderful organic shapes – and also from data and the digital world, a theme we discuss in the report. Helped by the subtle foiling effect, the reader's eye is drawn to the QR code so they can continue their journey online.

Discover more

THROUGHOUT THE REPORT
QR CODES WILL TAKE YOU
SEAMLESSLY TO EXTRA
CONTENT AND DATA ON
THE WEALTH REPORT'S
NEW DIGITAL PLATFORM



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Welcome

Rory Penn – Head of Knight Frank Private Office

By any of the measures that we track, whether luxury property prices, UHNWI populations or even private jet traffic, 2021 was a good year for those lucky enough to be the owners of property or other tangible assets



I am delighted to welcome you to the 16th edition of *The Wealth Report*, and the second to be produced under the shadow of Covid-19.

Notwithstanding uncertain times, we have still seen substantial wealth creation globally with the number of people with net wealth of US\$30 million or more increasing by almost 10% last year. We offer our perspective on current trends and opportunities and look to the future to help guide clients through evolving real estate markets.

What has become clear during the pandemic is that wealth cannot exist in a bubble. We need to be cognisant that inequality levels are increasing, and that the battle against climate change has reached what many now regard as a tipping point.

I am therefore pleased that this edition of the report features some incredibly thought-provoking contributions from those at the forefront of the struggle against what are arguably some of the biggest issues facing the world today. From the CEO of Prince William's ground-breaking Earthshot Prize initiative to one of the earliest female technology pioneers and philanthropists, to mention just two, I hope you find their insights as inspiring as I did.

Technology moves forward ever more rapidly and we try to keep up with this by reporting on the brave new world of the metaverse and the opportunities offered by a raft of new crypto investments.

Knight Frank also continues to move forward. We are delighted to have expanded our Private Office network into New York and Singapore to work alongside our London and Dubai private client teams, established a new commercial alliance in the US and set ourselves an ambitious net zero target.

If we can help you achieve any of your targets or aspirations, please do get in touch. The Private Office and wider Knight Frank network would love to be of assistance.

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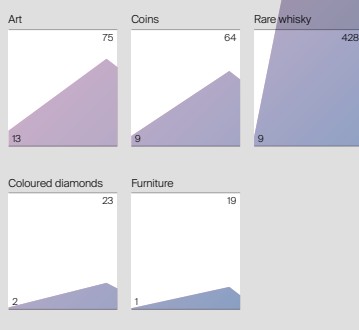
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Meet the contributors

Get to know more about a selection of this year's contributors



Flora Harley, *The Wealth Report's* Deputy Editor, has a passion for economics and an increasing interest in the digital world



Kate Everett-Allen, Head of International Residential Research, is a mountain lover and photographer who curates the report's Home chapter



Antonia Haralambous takes a keen interest in geopolitics and football. She examines private capital and real estate in "Power to the people" in our Investing chapter



James Culley, our data science lead, has a fascination for all things Finnish and crunches the numbers for our Wealth Sizing Model



Anna Ward, a Hispanophile and theatre-goer from our development research team, polishes her crystal ball in "Homes of the future"



Thusal Bennett of our GIS team enjoys applying science to spatial data. Lucky, as he crunched more than 30 million data points for our "Bright lights" article

Key findings

Liam Bailey, Knight Frank’s Global Head of Research, shares his key insights from the 16th edition of *The Wealth Report*

The *Wealth Report*’s objective is to provide an annual assessment of how wealth creation is shaping investment markets, and to highlight opportunities and risks. This year’s report paints a dramatic picture. Economic, wealth and property market trends are accelerating in the wake of the global pandemic, presenting an ever-wider range of options for investors – but there are growing systemic risks on the horizon.



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A WEALTH SURGE...

Last year’s global economic rebound supercharged wealth creation. Worldwide, the number of UHNWIs rose 9.3% over the year, creating an additional 52,000 very wealthy people compared with just 12 months earlier. This growth was evenly spread, with North America (up 12.2%) just ahead of the regional pack. Only Africa saw a decline in wealth. As we discuss, the growth in younger, self-made UHNWIs (21% of the total) will drive new investment themes and innovation.

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... PROMPTS A BACKLASH

With 83% of our Attitudes Survey respondents expecting their clients’ wealth to grow further this year, and our expectation of a further 28.3% rise in global UHNWI numbers by 2026, policy responses to tackle inequality are on the rise. Expect more wealth taxation, focused on assets rather than income, and a narrowing in the number of low-tax jurisdictions.

p23

LOCKDOWNS BE DAMNED – GLOBALISATION IS ON THE RISE

While international airport arrivals plummeted by 72% compared with pre-pandemic levels, as travellers navigated last-minute border closures, our report points to a demand for more, not less, internationalism. Around 15% of UHNWIs plan to apply for a second passport or new citizenship and 36% of those are planning to do so for a better quality of life. With global exports hitting record levels and cross-border real estate investment on the rise, globalisation is in the ascendancy.

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TECHNOLOGY, ACCELERATOR OF CHANGE

Digital pioneer Dame Stephanie Shirley confirms the speed of change; when she started out, computers were still programmed using punched cards (page 6). Her reflections put in context a

global cryptoasset market worth US\$2.4 trillion at the end of 2021, up 12-fold in under two years. Don’t understand cryptocurrency? Don’t worry – with 8,000 to choose from, one is bound to suit. Indeed, 18% of UHNWIs now own some kind of crypto, 11% have invested in non-fungible tokens (NFTs) and more than 60% of Attitudes Survey respondents see blockchain technology as an opportunity. Still not convinced? We report on a digital Gucci bag that sold for more than a real one. If that isn’t enough, get ready to have an opinion on the best type of metaverse to protect your digital property (page 9) – open or closed?

p36

PRIVATE CAPITAL DRIVES REAL ESTATE INVESTMENT

A growing share of private capital is pouring into property. While private investors increased their exposure to real estate investments by 52% in 2021, institutional investment volumes rose just 29%. Private capital now accounts for 35% of all investment transactions. With 23% of UHNWIs planning to invest in property this year, we tip offices to be the biggest target, with logistics pipping residential to second place for the first time.

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PROPERTY INNOVATION

The pandemic is driving business disruption, and property is at the epicentre. Priorities identified by our global team include: green hydrogen production (Australia has enough land to more than meet predicted global demand); renewable energy in Africa (data centres are being sited close to the Great Rift Valley’s geothermal springs); agritech and aquaculture in the Middle East; plus opportunities in the childcare and education sectors, forestry and vineyards. We also dive into the latest trends in hybrid working. The takeaway? If you’re only working from home or the office, you aren’t thinking hard enough about your options.

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ESG ON THE RISE, AND UNDER SCRUTINY

The three letters that increasingly dominate investment debates have gone mainstream. Some 80% of wealthy investors want more ESG-compliant assets, the main reason being to future-proof their portfolios – and why not, when we report a value premium of up to 18% for the “greenest” offices? The biggest barrier for future investment is “lack of opportunities” – a clear call to action for developers. Yet with private jet journeys rising 47% in a year (page 78) we provide a timely discussion on the sustainability conundrum at the heart of the luxury business (page 26), but point to some hopeful innovations tackling five major environmental challenges (page 44).

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LUXURY PROPERTY BECOMES THE INVESTMENT SECTOR OF CHOICE

The average value of luxury residential property increased by 8.4% in 2021, the highest annual increase since our Prime International Residential Index (PIRI 100) was launched in 2008. Of the markets tracked, only seven saw prices decline in 2021. We dive into the numbers pointing to the outperformers (44% growth in Dubai), the most expensive (you need US\$34 million to access the top of the Monaco market) and the most in-demand (53 nationalities own property in Provence, Europe’s most diverse market).

p58

PRIME FORECAST

Far from running out of steam, the luxury housing boom looks set to endure. Dubai, Miami and Zurich lead our 2022 forecast, with prime prices expected to end the year between 10% and 12% higher. Asian cities are expected to trail slightly in 2022, but even here prices will grow. Key themes to watch: agents will complain about stock shortages, buyers will complain about rising taxes and cooling measures, and city markets will be back in demand – but look for the fallout from China’s property slowdown.

p84

FINE WINE AND WATCHES LUBRICATE INVESTMENT

Not to be outdone by prime property, the luxury collectible sector saw a strong performance last year, with record-breaking sales volumes at the major global auction houses. Our Luxury Investment Index was led by fine wine and watches, both rising an impressive 16% through the year, and the art market delivering double digit returns at 13%. Digital innovation helped to widen the pool of collectors, with the NFT boom encouraging a rise in new younger market entrants.

p94

SUPERYACHTS, NEMO, VOLCANIC CITIES AND MORE...

In a packed edition we also find space to report on the superyacht boom; orders were up by 6% in 2021 led by buyers from the Gulf (which alongside the Red Sea is set to be the next superyacht hub). Andrew Shirley links clownfish and Jurassic Park to an innovative 75,000-hectare nature reserve with sustainable tourism and underwater data centres (page 90). Our assessment of new urban forms covers 150 new hubs in 40 countries, including one at the foot of a volcano in El Salvador funded by Bitcoin (page 80), and we revisit the final frontier – property in space (page 30). Read about all this and more, inside...

FOR MORE
ARTICLES HEAD
ONLINE TO
OUR DIGITAL
PLATFORM



Tech *titans*

Technology is constantly changing how we play, work and invest. *The Wealth Report* discusses the metaverse, equality and philanthropy with two pioneering entrepreneurs from different epochs of the digital age

Call me *Steve*

Dame Stephanie Shirley, software pioneer and philanthropist, talks to *The Wealth Report's* Editor Andrew Shirley

Dame Stephanie Shirley left Vienna in 1939 in something of a rush. Clutching just a few belongings, she was one of 10,000 or so Jewish children whisked away from Adolf Hitler's impending Holocaust aboard the *Kindertransport* trains to a new life in Britain.

More than 80 years later we are talking over the phone about what happened next – we were due to meet in person at her home in Henley-on-Thames, but Omicron put paid to that. A fortuitous decision as it turns out. I test positive a few days later and catching Covid-19 from me would not have been much of a footnote to such an extraordinary life.

It's a life so extraordinary that her autobiography *Let it Go* was due to be made into a Hollywood film directed by Haifaa Al-Mansour. The pandemic got in the way, but a Netflix mini-series is still on the cards, Dame Stephanie, or Steve as she prefers to be called – but more on that later – tells me:

"They have got a new writer, which is very exciting, so we are still living in hope."

As background research for this interview I devoured *Let it Go* in just a few sittings over the Christmas holiday. It is inspiring, thought-provoking and heart-wrenching. "Required reading for any would-be entrepreneurs or philanthropists" would be my back cover quote.

Her story, which, in a nutshell, involves overcoming chauvinism and personal tragedy to create a pioneering, boundary-breaking software company, Freelance Programmers, that went from a £6 dining-table start-up to a £3 billion valuation – and her becoming, in the process, one of the UK's richest women and most generous philanthropists – is laid bare so compellingly and with such brutal honesty it seems superfluous to try to dig any deeper.

I'm keen to discover, though, what Dame Stephanie, whose early career involved working with some of the computer experts who enabled the cracking of the Enigma code in the second world war and whose company's first computer programs – Freelance Programmers helped develop the black box flight recorders for Concorde – were just holes punched into cards, thinks about the role of technology today.

She lauds the AI-driven robots that help treat autistic children at the centres she has helped to fund. Dame Stephanie's late son Giles suffered

profoundly from the condition and much of the £68 million she has given away so far has been to autism charities like Autistica, which she founded. However, she felt compelled to add her signature to a recent open letter (co-ordinated by the Oxford Internet Institute, another of her philanthropic endeavours) to Mark Zuckerberg. It called on the Facebook founder to do more to study the effects of social media on young people. Does she worry that things have gone too far?

"I may have said it can be used for good, and of course it can, and it has made an enormous difference to the wealth and health of the whole world, but technology of itself is neutral. We have to remember that it's the users who decide what to work on, what to develop, what to deploy," responds Dame Stephanie.

"I'm very proud of the Oxford Internet Institute because it really has an understanding of life online. We struggled very hard to get the human at the centre of artificial intelligence," she adds.

It's striking, although perhaps not that surprising given that she has pledged to give all her money away, that Dame Stephanie is adamant that making lots of it was not a big driver when she first went into business.

"The idea of raising money never really crossed my mind. I didn't think it would be worth even trying, because we're talking about 1962 when I started. We really pulled ourselves

I'm very proud of the Oxford Internet Institute because it really has an understanding of life online. We struggled very hard to get the human at the centre of artificial intelligence

up by our bootstraps, each year making a little bit of a profit and reinvesting it back."

It's in sharp contrast to many of today's extravagantly funded start-ups, but Dame Stephanie doesn't begrudge their rapid rise. "These companies may become a unicorn before they've ever turned a profit, but they're valued so highly because they have control of something that's innovative and potentially very lucrative. It's all about information technology."

More important to her was beating the sexist attitudes of post-war Britain that dogged her early career, and creating a workplace where women, often discarded by employers after having the temerity to start a family, could work flexibly in a welcoming environment.

She's delighted that many corporations at long last no longer consider shareholder returns as their sole raison d'être. "Companies are

talking about the double bottom line, finance and social impact, and the triple bottom line of finance, social impact and the environment."

But having fought for gender equality so fiercely – she originally started using the pseudonym Steve when it quickly became apparent that potential clients weren't taking her letters seriously – I ask if is she happy with the way things have turned out some six decades later. The verdict is mixed.

"When I was disrupting things, women were disallowed, legally, from doing certain things. We couldn't work on the Stock Exchange. We couldn't sign a hire purchase agreement. We couldn't take up a mortgage without male authorisation. That seems very alien and out-of-date now, and what we've got left with is a cultural thing where women are legally absolutely one-to-one.

"But if you look at corporate boards, they're still predominantly male. Some FTSE 100 companies haven't even got one female on the main board. I was horrified that the legislation to monitor the gender pay gap should be waived during the pandemic as people think, 'well, that's not really very important. We don't need to do that.' I thought that was highly indicative of how society still looks at women."

Since she retired, giving away the fortune that eventually arrived when FI, the successor to Freelance Programmers, was floated on the Stock Exchange and she became Britain's eleventh richest woman, has been Dame Stephanie's main focus.

I put it to her that other wealthy individuals should be following her example and doing more with their fortunes. She insists it's not up to her to tell other people how to spend their money, although she concedes that it wouldn't be a bad thing.

"I mean I have to say yes, but it is a personal decision of the individual, whether they want to take pleasure from giving or whether they want to take pleasure from retaining the money and the security that it implies."

Although she is keen to stress that philanthropy doesn't need to just be about altruism – it can also be highly pleasurable for the donor – she emphasises that it's most effective when it goes beyond just giving to charitable causes. Using her business skills and leveraging her contacts and relationships ►



has, she says, multiplied the value of her donations many times.

Along with Scottish entrepreneur Sir Tom Hunter, whose approach she says she greatly admires, Dame Stephanie was one of the pioneers of what has come to be known as venture or impact philanthropy.

Her advice to would-be philanthropists: “Aim for some sort of professionalism, start local, start small relative to your wealth, choose causes you know and care about, and start anonymously because you do make mistakes.”

Returning to that train journey that was so instrumental in shaping the direction of her life, I want to finish our interview by asking Dame Stephanie if she feels the world has learned anything over the subsequent decades, given the scale of the current global refugee crisis.

Tactfully, she says she doesn't feel “up to speed” on the rest of the world, but believes “Britain's hostile environment is absolutely abhorrent. I think the decision to cut off undocumented migrants from access to any public services or access to healthcare is wrong and it's inhumane. As a patriot who loves this country passionately, I am appalled that we should set such an example.”

She implies such policies could be short-sighted. “In the short term, when you take an unaccompanied child refugee, you've got years of education and support, but when you look at entrepreneurs, a high proportion are migrants and their drive and energy seems to be based on a shitty childhood.”

The UK would certainly be a poorer place without the contribution made by Dame Stephanie who, even as her nineties approach, is planning new ways to help others. “The largest gift I've ever given was a quarter of my company [she believes passionately in employee co-ownership], but I have my biggest gift still to give – and that is my body for medical research.”

You really couldn't ask for any more.

READ MORE
ABOUT DAME
STEPHANIE
SHIRLEY'S
AMAZING LIFE



The largest gift I've ever given was a quarter of my company, but I have my biggest gift still to give and that is my body for medical research

Dame Stephanie with an early version of ERNIE, the computer that picks the UK's Premium Bond winners. Checking its randomness was part of her postgraduate work at the Post Office Research Station



King of the playground

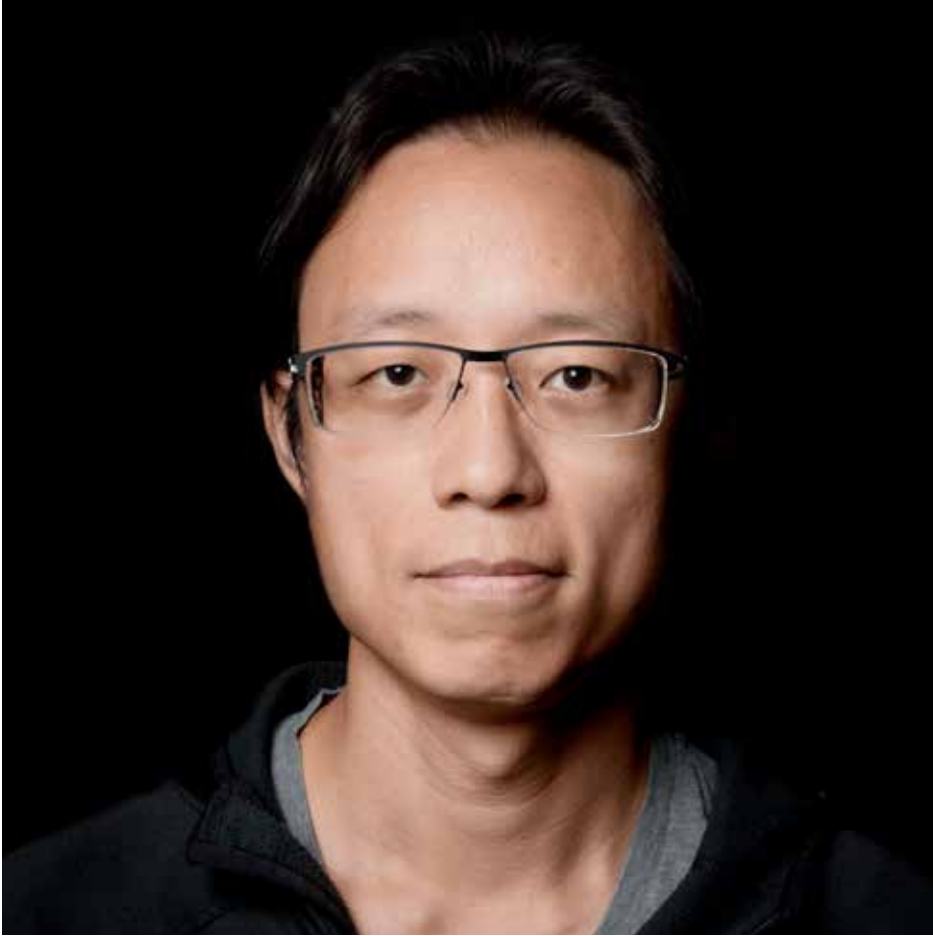
Metaverse maestro and champion of digital property rights Yat Siu talks tech with *The Wealth Report's* Deputy Editor Flora Harley



at Siu may not be a household name, but like our other tech titan Dame Stephanie Shirley he will go down as one of the most innovative and influential tech entrepreneurs of his generation. Similar to Dame Stephanie's, his fortune didn't appear overnight, nor did he ever set out to create one. And his journey, just like hers, also started as a child in Vienna.

I never realised it, but Siu, who now lives in Hong Kong, was on my radar long before our conversation for this interview. As a bit of a crypto fan myself, I remember being struck by something mentioned in an article in the 2019 edition of *The Wealth Report* exploring the synergies between art and newly emerging blockchains.

Almost jokingly, the article mentioned a game called CryptoKitties where contestants breed



Photograph courtesy of Kevin Abosch

and trade digital cats in the form of non-fungible tokens (NFTs) using the cryptocurrency ether. One, we breathlessly reported, had been sold for the ether equivalent of US\$170,000.

What the article didn't mention was that the publishing rights for CryptoKitties, which at one point was so popular it threatened to collapse the Ethereum blockchain, had in 2018 been snapped up behind the scenes by an outfit called Animoca Brands. The co-founder of that company? Yat Siu. The net worth of that company now? More than US\$5 billion.

But back to Vienna. Siu was the only son of classical musicians who'd escaped China's Cultural Revolution in the 1960s. He was also being groomed for a musical career – “think of tiger parents and that was my mum and dad” – but, struggling with his compositions, he resorted to creating open-source programs on his Atari computer to help him.

Other Compuserve users started paying for his software: “people were sending me cheques, but I didn't even have a bank account,” he says. When eventually Atari itself came knocking he

was still just 13 and had, almost by accident, stumbled on to his future career path. It's a trend that keeps recurring, he says: “I tend to end up in places because I'm doing stuff, not because of any pre-ordained strategy.”

When he was 18 he moved to the US to work for Atari, but when the business stopped making computers in the early 1990s he helped set up a company focused on Virtual Reality Markup Language. That led to an acquisition by SGI, which in turn brought him to Asia. Looking to test the waters of the Far East, Siu – at the time, “the only Asian in the firm” – ended up in Japan, Taiwan and eventually in Hong Kong where he was able to claim residency because of his father. ▶

Virtual real estate functions in very much the same way as physical real estate – location is key



Yat Siu puts his musical training to good use at Dalton Learning Labs, an educational project to foster future entrepreneurs that he helped to set up

A number of trailblazing business ventures followed including Hong Kong Cybercity, the first free email provider in Asia, and then Outblaze, which developed web-based communication and collaboration services. In 2002 he was named a World Economic Forum Global Leader of Tomorrow and in 2006 a Young Global Leader. But it was in 2009 that Siu's first big taste of commercial success came with the sale of the messaging division of Outblaze, which by then had 75 million users, to IBM for an undisclosed sum.

Animoca, a mobile games developer, emerged in 2011, and from that Animoca Brands was spun out in 2014. Fast forward to 2017 and Siu is in the Vancouver office of Fuel Powered, a firm he's looking to buy. Sharing the office is developer Axiom Zen, which is working on a new game called, yes, you guessed it, CryptoKitties.

It's here that his quest to reinvent cyberspace and empower the people who use it through a new version of the internet referred to as Web3 really began. "Animoca Brands has a mission to deliver digital property rights to the world," Siu says. "Some people look at us as a gaming company because we're starting with gamers. But we're doing this because we feel gamers have the most obvious understanding and relationship with their assets in the context of ownership being virtual."

Companies like Facebook are building a closed metaverse. We intend to construct an entirely open ecosystem

SPENDING SPREE

Inspired by the potential of NFTs and blockchains that Siu saw in CryptoKitties, Animoca Brands went on a spending spree that, to date, has seen it make "more than 150 investments in NFT-related companies and decentralised projects that are contributing to building the open metaverse".

The crucial word is "open". Mark Zuckerberg sparked metaverse mayhem in 2021 when he announced that Facebook was rebranding as Meta and creating its own digital universe where users will hang out, date, exchange news and views, shop, game and invest, all virtually. But it will be closed. The platform will still have control. Siu doesn't think that's right; and it's now that our conversation starts to get really interesting.

"Companies like Facebook are building a closed metaverse," he explains. "We intend to construct an entirely open ecosystem. Each

one of our 'games' will become decentralised autonomous organisations (DAOs) meaning that ultimately, despite being major holders of the asset, we will be participants and have no control."

I ask why that matters to users. "For a start, you cannot be deplatformed," Siu responds. To me that initially just sounds like Donald Trump being kicked off Twitter, but it's much more serious, insists Siu. "When you lose access to the digital world you may lose your social connections or your ability to do business; you frankly become a lesser human because you have lost access to online services. But who controls those online services? The platforms do."

It makes sense when Sui talks about apps being arbitrarily delisted or businesses being pushed off social media sites. "In the physical world, we have governments and judiciaries to protect us from that. You cannot be evicted from your property because someone feels like it. The digital world does not have that governance but blockchains basically solve that. NFTs become that model for digital property rights."

BIG DATA

The most valuable corporations in the world are all technology companies – at the time of writing, Apple had just crossed the US\$3 trillion valuation mark – and that value has largely been driven by data: your data. Siu argues that we should be getting paid for it.

"In the physical world we often get paid, as a derivative of our knowledge, our time, our data, in the form of a salary or employment. The problem we have today, and the opportunity, is

Animoca empire

Selected subsidiaries, investments and cryptocurrencies

- OpenSea
- Decentraland
- Dapper Labs
- Sky Mavis
- The Sandbox
- Sand
- Revv Racing
- Formula E: High Voltage

that this data or knowledge dissemination is limited by the number of connections we can physically and mentally interact with. In the metaverse this can be done at infinite scale. This is why digital property rights matter; if you own your data, then you're in a position to benefit."

Some consider the whole concept of a metaverse as dystopian. But Siu, using the popular gaming platform Roblox as an example, argues that it is others taking advantage of our efforts and personal information, in effect making us "digital slaves", that is the real dystopia. "So if kids make virtual assets and sell them in Roblox, which Roblox allows, they get 25 cents on the dollar. That's almost slave labour, I would say. You would never live in a place where they charge 75% tax on anything you do, right?

"We now get to own our digital identities. If you create a digital property, using your talent and creativity, instead of selling it through a platform, or not receiving value, it's direct. You know the purchaser and can receive a fee every time it transacts on the blockchain. We think this is the true evolution."

I ask if he sees himself as a moral campaigner as well as a digital entrepreneur. "Well, it's a mission," he replies. "With your capital being created by you and your data, you actually start creating a form of universal basic equity. Our

capacity as both an operator of and investor in blockchain products allows us to glimpse an opportunity that goes far beyond just another capitalist endeavour principally concerned with maximising profits. We believe that we have a chance to develop the framework for a more sustainable, ethical and equitable capitalism."

VIRTUAL VALUE

The idea of virtual assets even having a serious value (for more on this see page 46) can be hard to get your head around, but Siu, whose play-to-earn three-dimensional gaming metaverse The Sandbox – in 2018 one of his first major NFT gaming acquisitions – sees plots of virtual real estate sell for hundreds of thousands of dollars, says it does make sense.

"Virtual real estate functions in very much the same way as physical real estate – location is key. For example, in The Sandbox property around Atari or Snoop Dogg is much more valuable. Places that have more influence have higher value. It's community and an embedded network effect."

The same applies to crypto art – Animoca Brands is an enthusiastic buyer of the likes of Bored Ape Yacht Club NFT editions – fashion, and other digital assets, he insists. "In the real world when you're buying a designer bag, what

are you buying? 99% of the value is the idea and the power and the network effect of owning that designer and perhaps the rarity. It's the same: why you buy it isn't real, it's the idea and the influence."

Influence is something that Yat Siu is rapidly accruing. The monthly value of the virtual assets being traded puts the blockchain gaming ecosystem of Animoca Brands ahead of the GDP of Djibouti and Bhutan, among others. And many more businesses are likely to be added to the fold. A capital raising round for Animoca Brands in January attracted almost US\$360 million from the likes of Soros Fund Management and Winklevoss Capital.

Suddenly, my hour spent chatting to the softly spoken entrepreneur seems like a very valuable commodity. If you haven't heard of Yat Siu, or wrapped your head around virtual assets, DAOs, metaverses, Web3, decentralised finance and NFTs, now is the time to start getting up to speed.

CONFUSED? HEAD ONLINE FOR A QUICK GUIDE TO THE ABC OF NFTS

The Sandbox, one of Animoca Brands' gaming metaverses



CHAPTER ONE

Wealth

Discover why wealth populations grew
in almost all corners of the globe and what
UHNWIs should be considering for the future



ACCUMULATION, ASSETS AND ACCELERATION

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The latest UHNWI numbers
from our Wealth Sizing Model

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Global wealth industry experts
on what to look out for in 2022

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Meet the woman on a mission
to persuade the wealthy
to pay more tax

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Can luxury lifestyles be both
aspirational and sustainable?

THE FINAL PROPERTY FRONTIER

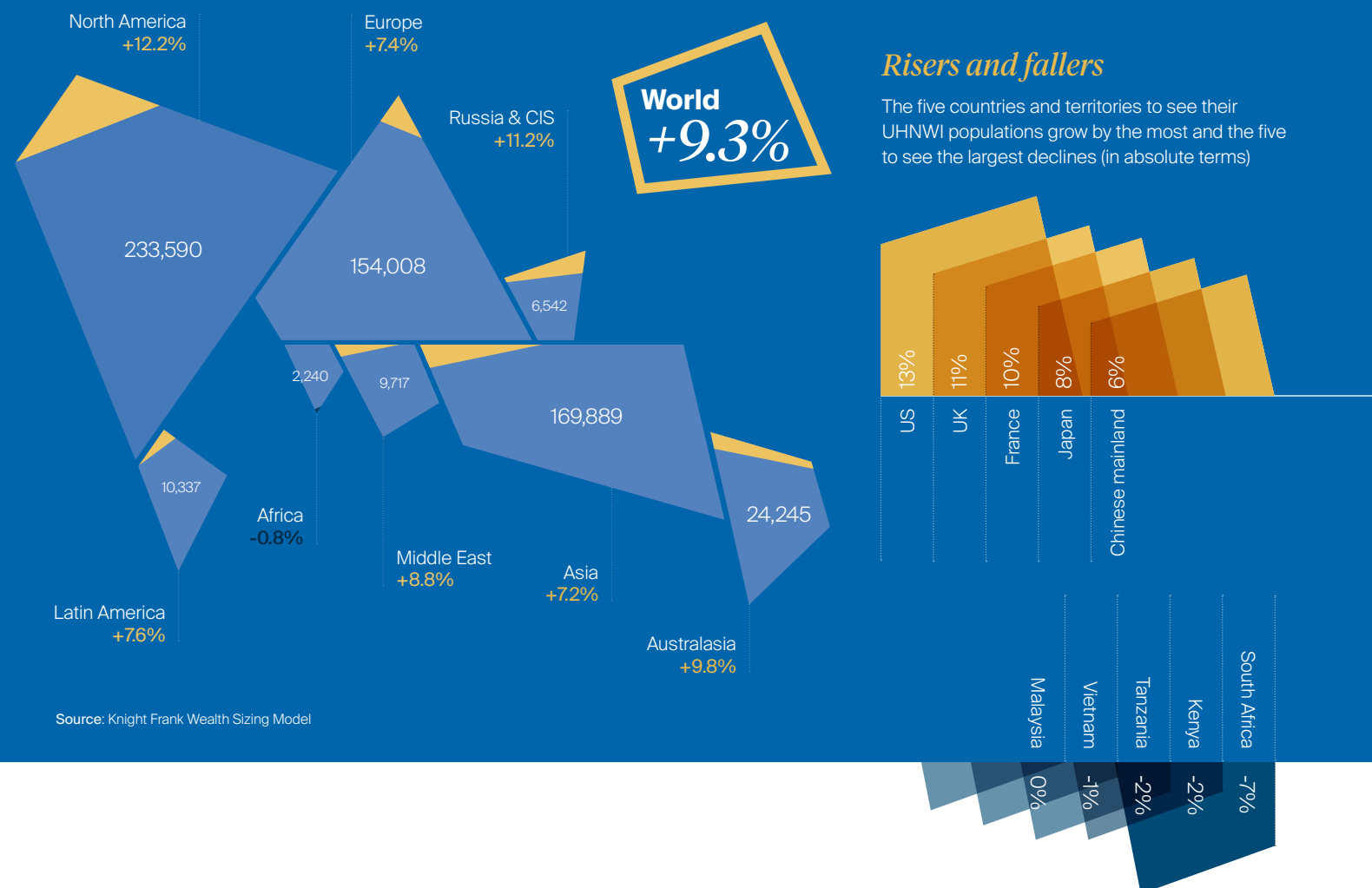
30

Head out of this world
for a new view



Global *wealth* distribution

Number of UHNWIs per region and annual change 2020–2021



Accumulation, assets and acceleration

If 2020 saw the fortunes of the wealthy remain resilient, then 2021 saw them accumulate. Flora Harley unpicks the latest numbers from the Knight Frank Wealth Sizing Model, compiled by our data science lead James Culley, to assess the extent of those gains



The world is still enduring a period of significant disruption. While the Covid-19 pandemic has primarily been a health crisis, the knock-on effects on economies, markets and assets have been astounding in many ways. Globally, pandemic-related restrictions and lifestyle shifts have led to amassed savings and an increase in levels of wealth that has not been seen for years.

Our number crunching reveals that the world's population of UHNWIs (those with net assets of US\$30 million or more, including their primary residence) rose by 9.3% in 2021, following on from growth of 2.4% in 2020. This is reflected in the results of our Attitudes Survey: 82% of respondents (wealth advisors and private bankers) said their clients' wealth had increased last year, with more than half describing the rise as "significant" (defined as more than 10%).

Over the past five years, the previous optimism peak was in 2017 when 72% of respondents to our Attitudes Survey said their clients' wealth had increased and we saw the world's ultra-wealthy population grow by 10%, incubated by what were described as "Goldilocks" economic conditions. The backdrop is vastly different today, but the story for wealth and asset performance is not dissimilar.

The only world region to see a decline (-0.8%) in its UHNWI population was Africa. According to our Attitudes Survey, the continent's wealth advisors were also the most pessimistic about their clients' wealth prospects. Indeed, three out of the five nations to see their UHNWI populations fall the most were in Africa.

ACCUMULATION AND ASSETS

The savings amassed during 2020 have enabled significant investment upside over the past 12 months. Access to technology and the digital democratisation of investments, including private equity, have led to greater levels of wealth creation and growth. This is something that will gain momentum over the coming years and that we discuss in more detail on page 18.

Asset price rises, from property markets to stock markets to luxury collectibles, have all helped to boost the fortunes of those wealthy enough to hold investment portfolios.

The top five gainers for UHNWIs, in absolute terms, were the US, the UK, France, Japan and the Chinese mainland. Equity markets played a big role with the French CAC 40 up around 30% during 2021, the US S&P 500 rising over 25% and the UK FTSE 250 around 15% higher.

Over the ten years to 2026 the global UHNWI population will have more than doubled

Our Attitudes Survey reveals that, on average, just shy of two-thirds of UHNWI wealth is allocated to property. Just under a third of total wealth is held in principal and second homes, while the remainder is invested directly or indirectly (through real estate investment trusts (REITs), for example) into investment property.

Our analysis of prime residential market performance on page 50 highlights the contribution of rising house prices around the globe, while for investment property the most recent data from the MSCI Global Property Fund Index shows a total return of 10% for 2021. The Macrobond FTSE EPRA/NAREIT World Equity REITs Index saw a 33% return for the year.

ACCELERATION

Few imagined at the start of the Covid-19 crisis that we would experience the V- or "Nike Swoosh"-shaped recovery that saw many economies back to pre-pandemic levels by the end of 2021. This may explain why our Attitudes Survey respondents are so bullish – 83% expect their clients' wealth to increase in 2022.

The five-year forecasts generated by our Wealth Sizing Model have duly increased given the prospects for wealth growth and creation in the coming years. Between 2021 and 2026,

we forecast that the global UHNWI population will grow by a further 28%. Over the ten years to 2026 that represents a more than doubling in the number of global UHNWIs – from 348,355 to 783,671.

By 2026, Asia will surpass Europe as the second largest regional wealth hub. During that time we predict, for example, that Singapore will have witnessed a 268% growth in its UHNWI population to around 6,000. However, ten-year growth is led by Australasia. The region's UHNWI population, led by New Zealand (from 1,249 to 4,618), is expected to more than treble by 2026.

As mentioned before, the ease with which investments can now be made and the speed of innovation will help to create new fortunes globally. As the Hong Kong-based digital entrepreneur Yat Siu points out in our interview on page 9, the metaverse offers the opportunity for anybody connected to the internet to create wealth in ways that would have been unimaginable just a few years ago.

Further opportunities are discussed by our "Inside wealth" panellists over the following pages, but we should perhaps temper our exuberance.

As the aforementioned African wealth growth numbers show, wealth creation among UHNWIs has not been equal. But away from the ranks of the asset-rich, the disparity is even starker with global inequality levels, exacerbated by rising energy and food costs, increasing – even in the developed world.

Some mutter ominously about revolution, and a group of US millionaires is even calling to be taxed more (see page 24) to help correct the imbalance. Against this backdrop, it would be cognisant to recognise that wealth creation cannot continue in a vacuum. ▶

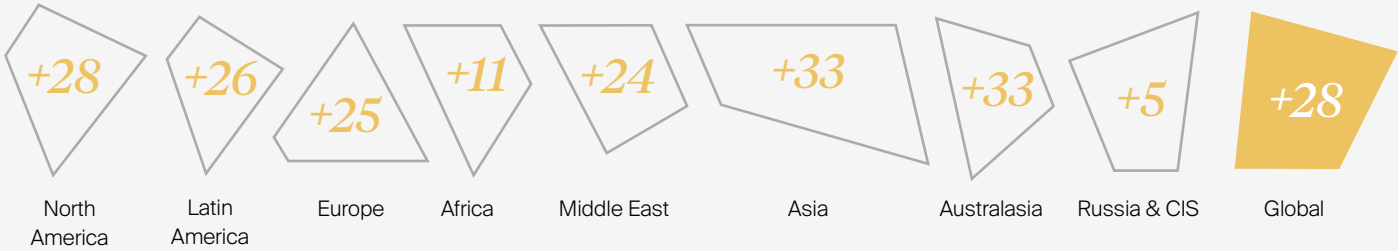
HEAD ONLINE
TO EXPLORE THE
FULL RESULTS
BREAKDOWN BY
COUNTRY/TERRITORY





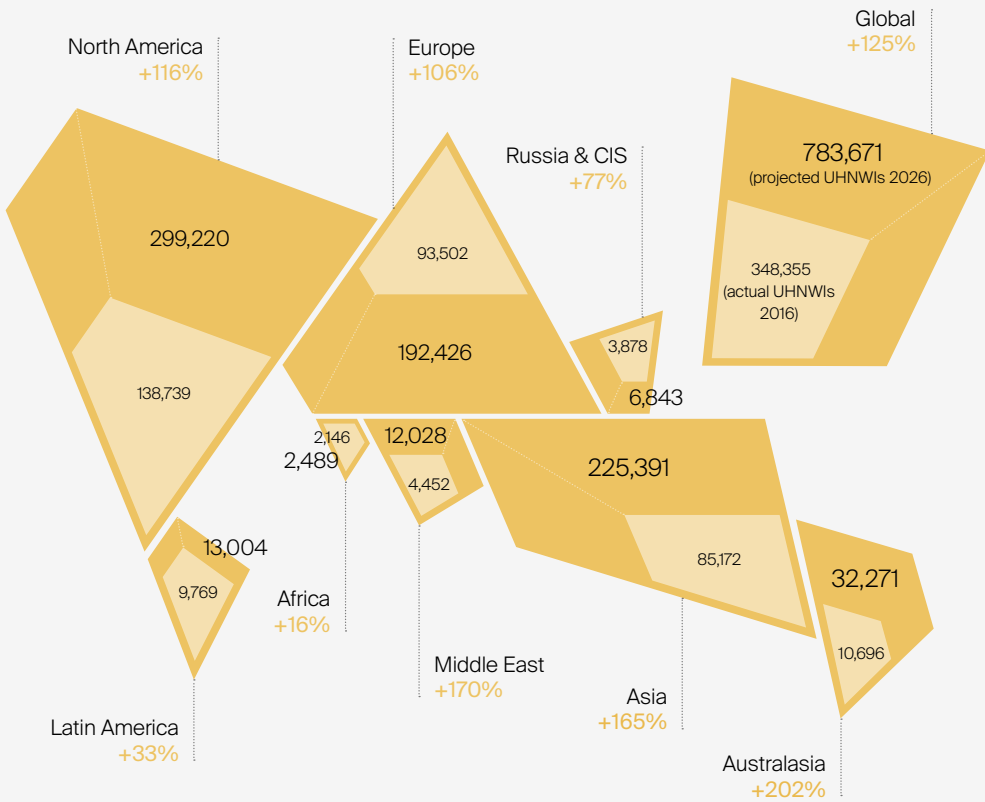
The five-year view

Predictions for % growth in UHNWIs by region 2021-2026



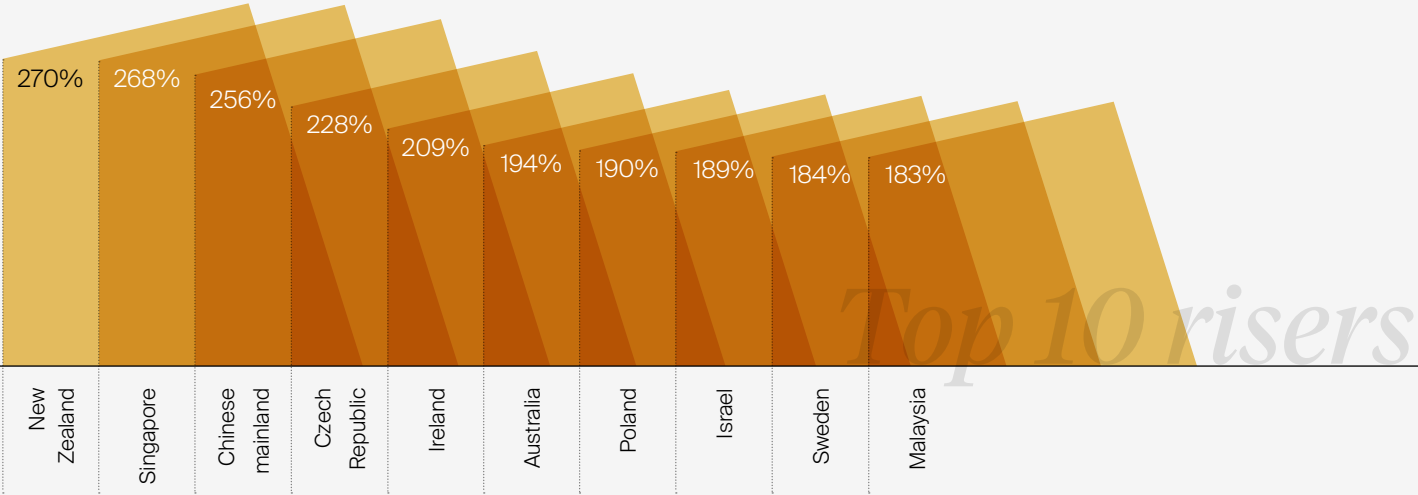
The ten-year view

Projected increase in UHNWIs by region 2016-2026



Wealth hubs 2016-2026

The countries and territories forecast to see the largest proportional increase in their UHNWI populations

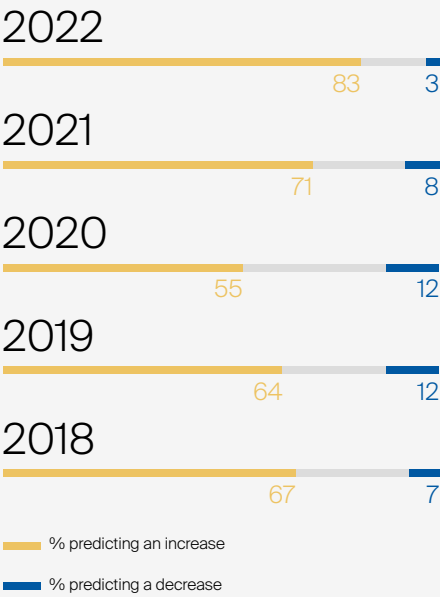


Source: Knight Frank Wealth Sizing Model



The individual view

Survey respondents' expectations for their clients' wealth direction in...



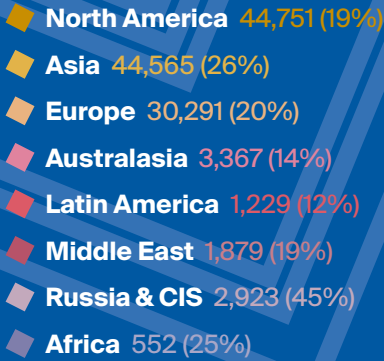
Note: Based on five years' Attitudes Survey data



Next generation wealth

UHNWIs who are self-made and under the age of 40

Region Number of next gens (% total UHNWIs)



Source: Knight Wealth Sizing Model

What's next?

Using the results from our Wealth Sizing Model and Attitudes Survey, Flora Harley looks at the size of the “next generation” of the world’s UHNWI populations – and at what that could mean for property markets



lobally, we estimate that 129,557 UHNWIs are self-made and under the age of 40; almost a fifth of the total population.

North America, with 44,751, has the largest cohort, but Asia’s marginally lower total of 44,565 accounts for a higher proportion – 26% – of the region’s super-wealthy. Russia, however, boasts the highest relative number of next-gen wealth creators, with 45% (2,923) of its UHNWIs falling into the category.

So, what does this mean? Well, for starters, in the 2021 edition of *The Wealth Report* Attitudes Survey we uncovered that 70% of UHNWIs under the age of 40 had different views to their parents when it came to property investing – one of the reasons that we decided to calculate their numbers this year.

This generation is more global, more tech savvy and places greater emphasis on wellbeing – their own, that of their families and that of the environment. Our Attitudes Survey respondents also told us that the next gen view real estate, be it for a home or investment, as more akin to an investment portfolio – the economic case has to stack up.

In Singapore, tech-savvy young UHNWIs are looking beyond the traditionally sought-after Good Class Bungalows (the pinnacle of the city’s property ladder), often seen as exclusive and a long-term store of wealth, notes Nicholas Keong of Knight Frank’s Singapore Private Office. “They want flexibility to build their own home to suit their lifestyle. They often include smart technology, a focus on energy efficiency and connectivity, both digital and physical.”

Younger UHNWIs are global buyers who want to hold assets across geographies, adds Rory Penn, Head of Knight Frank’s Private Office. “They put emphasis on service provision, open space, amenities and room for entertaining, and are willing to refurbish and reimagine space.” They are also getting wealthier, he points out. “In London’s super-prime (£10 m+) market, there has been a fundamental shift towards younger buyers.”

As this cohort of wealth continues to grow, property markets will adjust. For some insights into the future of the home, see page 66. In addition, we will likely see more tokenisation and digital ownership of property emerging due to greater adoption and understanding by this younger generation – mortgages based on non-fungible tokens are already being issued. See our “Inside wealth” article on the next page for more on this.



Meet our panel

- AC**
Alexander Chartes
Investment Director at Ruffer LLP
- AT**
Alexandre Tavazzi
Global Strategist & Head of the CIO Office, Pictet Wealth Management
- CR**
Caspar Rock
Chief Investment Officer, Cazenove Capital
- DB**
David Bailin
Chief Investment Officer, Citi Global Wealth Management Investments
- JW**
James Wey
Head of Singapore and Southeast Asia, Wealth Management, JPMorgan Chase & Co
- JG**
Julie Gauthier
Investment Director, Stonehage Fleming
- KL**
Kunal Lakhani
Director, Family Office & Major Family Groups, NAB
- PYL**
Pierre-Yves Lombard
Deputy Head Private Clients, Asia Ex-Japan, Lombard Odier
- PM**
Piers Master
Partner and Head of Private Wealth, Charles Russell Speechlys
- SH**
Sheldon Halcrow
Executive Partner, Caleo Capital

Inside wealth

Flora Harley reveals the threats and opportunities to UHNWI wealth creation and accumulation identified by our Attitudes Survey, and quizzes a panel of ten leading wealth advisors from around the world for their thoughts on the big issues facing their clients

WHAT ARE THE BIGGEST AREAS OF OPPORTUNITY FOR PRIVATE WEALTH?

PYL Ongoing tension around regulatory changes on the Chinese mainland doesn't change the attractiveness of technology and innovation in Asia – especially for hardware, software, robotics and electric vehicles.

DB People don't realise how distorted the world still is by the pandemic. We are in a transition point from early recovery to the middle and need to assess which companies will do well in that cycle. Opportunistically, we look towards what we call unstoppable trends. Broadly, there are four: climate; cyber-security and digitisation; longevity and healthcare; and the rise of Asia.

JG The densification of digital infrastructure needed to support 5/6G combined with our reliance on technology will require heavy investment for years to come. We are also looking at DeFi (decentralised finance) strategies within cryptocurrency markets. The adoption rate of crypto is like the internet in the early 1990s.

KL A key investment thematic is targeted responsible investing, and not just the E in environmental, social and governance (ESG). There is strong evidence that leadership in ESG, which is calculated and properly calibrated, enhances overall return for investors.

SH In the private equity space there is a lot of interest in cellular and sustainable agriculture as well as green energy.

JW We continue to like equities, particularly those that follow broad ESG themes and selective plays in healthcare and pharmaceutical. Pandemic-induced technical plays that are time sensitive are another important area. ▶

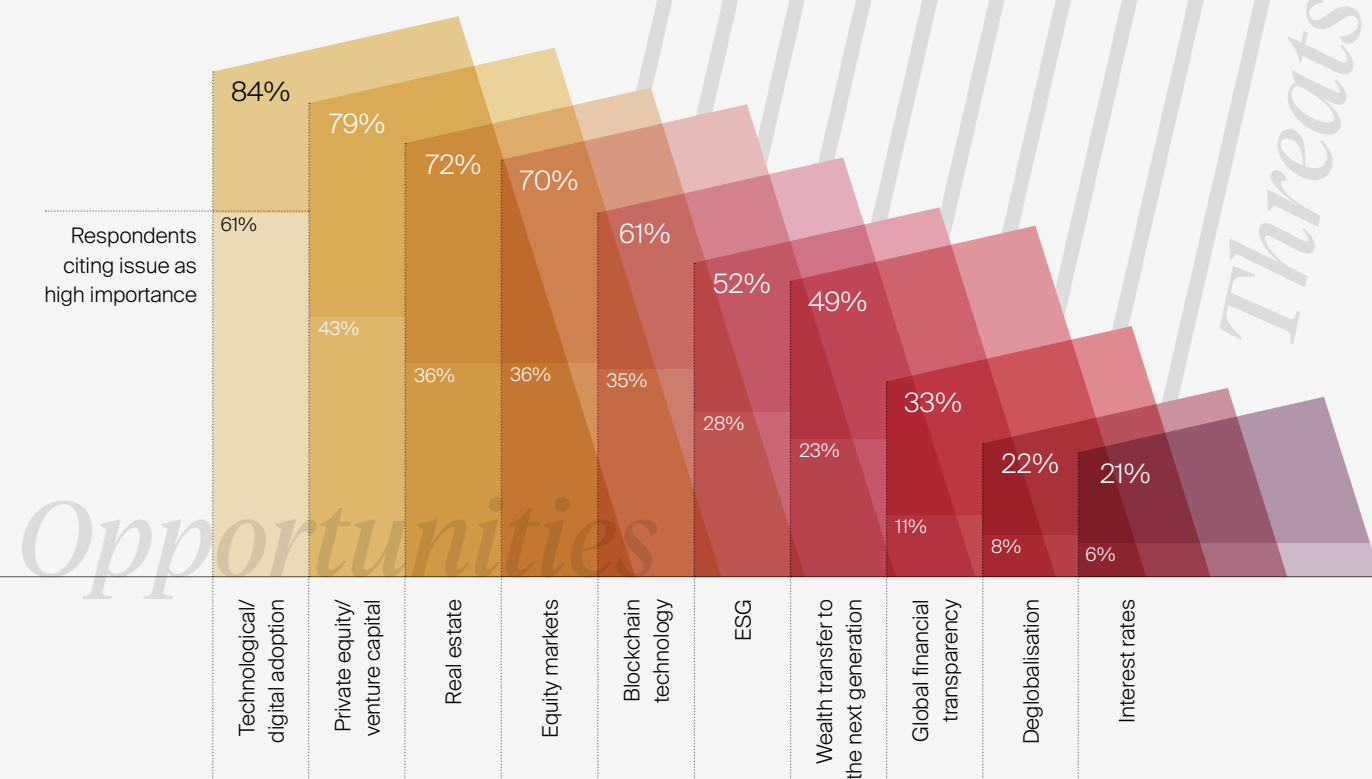
People don't realise how distorted the world still is by the pandemic

David Bailin

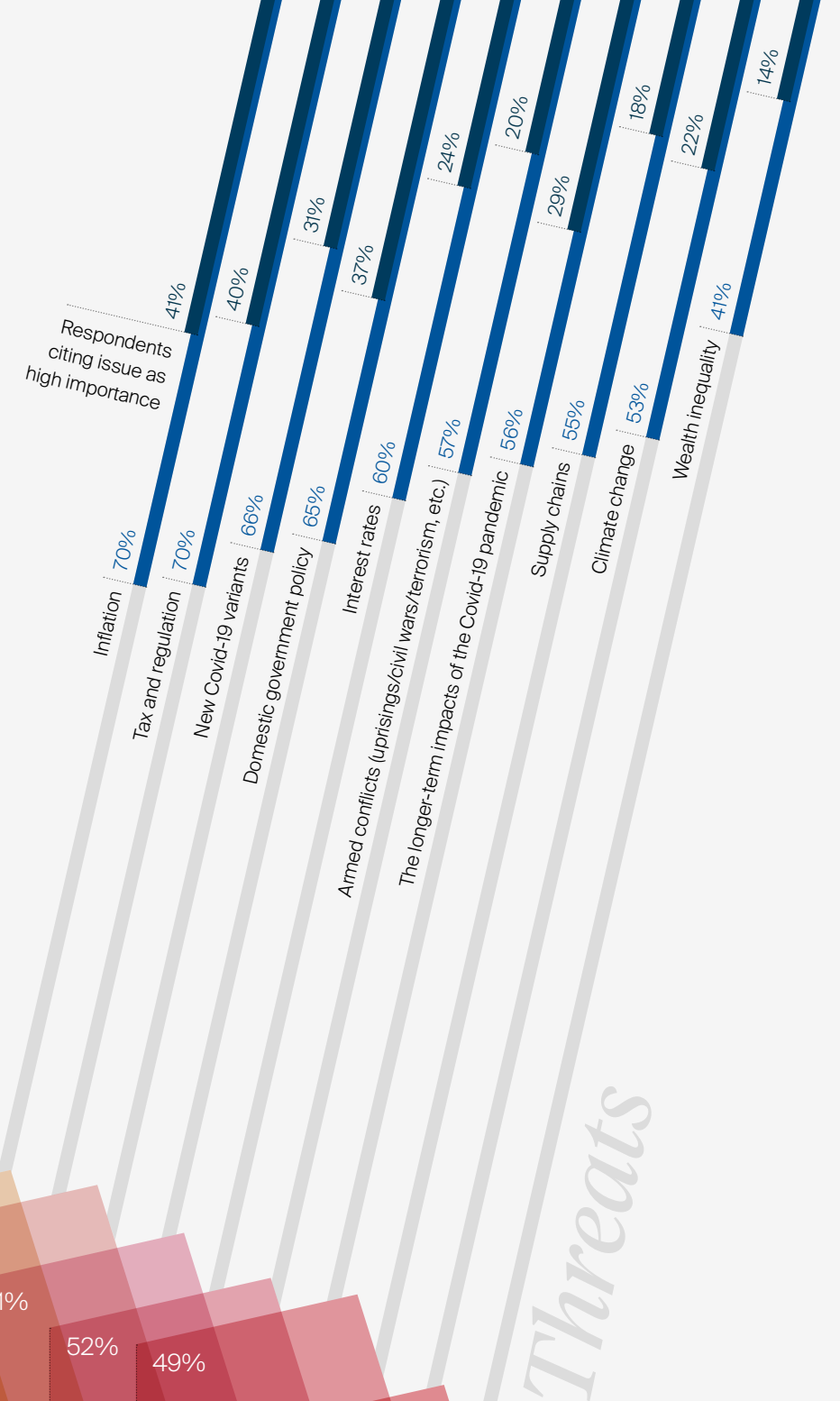


Sunshine and rain

Top ten opportunities and threats for creating and preserving wealth



Note: % of respondents who rated topic as an increasing threat or increasing opportunity, and % who rated it as of high importance





Political risk is going to be much more significant in the years ahead

Alexander Chartes

WHAT RISKS ARE YOU WATCHING OUT FOR?

PYL If rates are raised aggressively then this could be a drag for long duration assets. China's macro policy reforms – in technology, finance, education and real estate – are part of a broader trend to watch and we expect more in the run up to the Party Congress in November.

KL Because of the increase in inequality, there will be greater pressure on higher taxation for those with higher assets. We may see a shift to asset rather than income taxing in more OECD countries.

AT Can Asian nations continue to have a zero Covid policy? The initial part of the recovery was based on manufacturing. The second leg is services as economies reopen and this is where you have the big bulk of 2022 growth. If lockdowns continue, this recovery scenario is at risk with a double whammy of growth going down and inflation going up.

There will be greater pressure on higher taxation for those with higher assets

Kunal Lakhani

AC Political risk is going to be much more significant in the years ahead. China is a particular concern with its attempt to shift the growth model away from excessive real estate development towards more consumption and next generation industries.

DB The slowdown in China's economy; the Federal Reserve tightening too quickly (which would be a mistake); a misjudgment of inflation (we think it is transitory); and a potentially destabilising Russian invasion of Ukraine.

SH Ongoing Covid disruption and lockdowns are particularly worrisome for the African continent. In South Africa the economy is so fragile it can't afford or tolerate another full lockdown.

CR From a tax point of view, levelling up or common prosperity are not too different as political aspirations, but the delivery is different. Both are trying to address inequality, and tax policy is an instrument. Pandemic deficits need to be filled and other holes may emerge. In the UK, the phasing out of petrol and diesel will cost the Exchequer £30 billion in fuel duty revenue so that gap will need to be filled, too.

Digital real estate will become just as important as physical assets over the next decade

Julie Gauthier

OUTLOOK FOR RATES

The potential velocity of interest rises poses one of the most perplexing questions for investors. Of our Attitudes Survey respondents, 60% see rate rises as an increasing threat, yet 21% view them as an opportunity. Linking to the inflation debate, we asked our panellists for their views on how much higher the Federal Reserve's interest rate will be by the end of 2022. The average view was 75 basis points (bps), with a range from 25bps to a hawkish 225bps higher.

PM Tax is a traditional worry and we are now seeing the possibility of taxes being extended to jurisdictions which traditionally haven't had them. The Middle East, for example, is mulling over direct taxation in the future. Privacy is another concern. UHNWIs worry that there is too much information about them and their families.

HOW DO YOU VIEW REAL ESTATE WITHIN YOUR CLIENTS' PORTFOLIOS?

PYL We are seeing increasing interest in both indirect exposures, by way of real estate investment trusts for example, and direct investment in physical real estate, especially as a hedge against potential inflation.

JG Digital real estate will become just as important as physical assets over the next decade. We've seen a big increase in real estate developers looking at tokenising properties and allowing investors to invest in those tokens.

SH We always have a healthy allocation to property. Our clients are starting to embrace a broader variety of alternative ways of accessing property, such as listed property. They are also increasingly looking at homes overseas, a plan B and/or a second passport. (31% of South African UHNWIs plan to apply for a second passport/citizenship, according to our Attitudes Survey.) Traditionally they would look to the UK or Malta, but are increasingly turning to the US and Portugal.

JW With inflation, traditionally, there are two assets that benefit most – equities and real estate. So pay attention to these. For Asian UHNWIs real estate is an important source and store of wealth and is always an integral part of the portfolio mix.

CR In the UK we have good exposure to supermarkets, retirement living, doctors' surgeries, warehouses and last-mile logistics. We also like digital infrastructure assets. More specialist vertices mean more exposure to the upside. ▶



Blockchain, Bitcoin and Betamax

Over 60% of Attitudes Survey respondents cited blockchain technologies as an increasing opportunity. Here is a selection of thoughts on cryptoassets and blockchains from our panel

JW We have a JPMorgan coin. This is being utilised to clear large internal trades, moving billions around the world safely and securely using blockchain technology. This could have huge implications in enhancing payment systems more broadly.

CR There are some interesting potential applications: for example, blockchains could make real estate markets far more liquid. In the past, you couldn't do a property tracker fund as you couldn't buy a thousandth of every property – but if they were on a blockchain, you could.

SH Increasingly, clients are asking for 1%–5% of their portfolios to be in crypto. It reminds me of the battle of VHS and Betamax – eventually VHS won. Now the question is, is it bitcoin or ether or another? The sooner we embrace it and authorities understand how to regulate and tax it, the better.

AT The lack of faith in paper currencies means many are using crypto to protect wealth. Gold prices have reacted less to the current round of inflation than historically, but we saw big movements in cryptocurrencies. It is not a mature market and is difficult to recommend, but we are watching the space.

JG We are seeing a shift within the banking industry to accepting and managing cryptoassets, allowing them to be used as collateral and converting crypto into fiat. It is not a widely marketed service, but banks recognise that the younger generation are going to be using crypto as a currency.

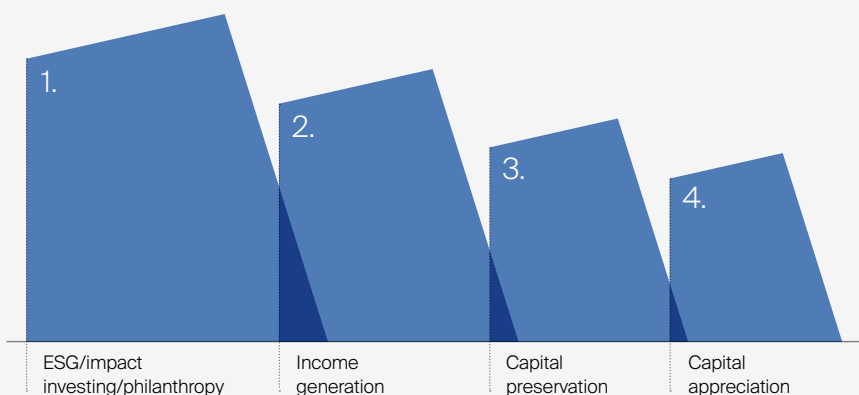
PM From a legal and tax perspective cryptoassets are tricky as they are difficult to define. A lot of people do not have a sufficient understanding of them for the comfort levels to be there – they are a risky choice. But I suspect they are here to stay and will be more heavily regulated.

The sooner we embrace it [crypto] and authorities understand how to regulate and tax it, the better

Sheldon Halcrow



Appreciation first The most important investment strategy drivers for UHNWIs



WHAT IS YOUR BIGGEST PIECE OF ADVICE?

PYL Sustainability needs to be integrated into client portfolios. It is not just a “nice to have” – we think it will be one of the most important drivers of future returns.

DB Almost all UHNWIs have too much cash, typically 20%–30% of portfolios. For the past ten years they kept cash to “buy the dip” – but didn’t do it. The best way to preserve wealth is to grow it and to do the opposite is a significant mistake.

JG Think long and hard about your goals for your wealth. Benchmarking is great, but people need to be honest with themselves and understand what they are really after.

AC Diversification. UHNWIs should ask whether they are genuinely diversified. The conventional balanced portfolio of 60/40, for example, is on borrowed time. Many have sought diversification in illiquid assets such as private equity, but locking up money only gives the illusion of stability.

KL Take your time assessing opportunities and be patient. A good PowerPoint deck doesn’t make a good investment – understanding the business opportunity is still critical.

SH Machine learning, artificial intelligence and big data will increasingly be a major theme. Gaming, virtual reality and streaming are still relatively new and have taken off in a big way – there are some great opportunities here.

AT Spend time understanding the consequences of decisions. Asset allocations drive 90% of return so before investing make sure to understand what is implied with potential drawdowns and liquidity.

You will never be truly happy if you move purely for tax reasons

Piers Master

JW Be nimble and alert. We must pay attention to what goes on around us. To navigate the challenging and shifting landscape, you must sometimes change tactics and deploy new strategies very quickly.

CR Think about appetite and time horizon. Think about how much illiquidity your assets can have. Your portfolio may even need different pots with different liquidity profiles to build the overall portfolio.

PM Think about what you want to do with your life. UHNWIs are in a privileged position and one with choices – use them to your advantage. You will never be truly happy if you move purely for tax reasons; there must be more to it.

HEAD ONLINE FOR MORE INSIGHTS AND ADVICE FROM OUR PANELLISTS



Mobile numbers

The rise in global wealth mobility increasingly influences prime property market performance. Access to second passports and citizenship by investment schemes helps grease the wheels. Flora Harley shares a selection of the latest numbers and our Attitudes Survey findings

36%

The proportion of Attitudes Survey respondents looking to acquire a second passport or citizenship who chose “safety and better quality of living” as the driving factor. The next most popular reasons were “tax” (30%) and “ease of travel” (27%).

As of October 2021, the number of main applicants who have been granted a Portugal Golden Visa since the programme launched in 2012, along with a further 17,014 dependent family members. The programme changed significantly in December 2021.

10,087

1

The number of applications rejected by the Vanuatu Citizenship by Investment Scheme since it was launched in 2015. A concerned EU is considering scrapping visa-free travel from the island.

The proportion of UHNWIs planning to apply for a second passport or new citizenship, according to our Attitudes Survey.

15%

166

The gap in the number of visa-free or visa-on-arrival destinations available to the top-ranking passports (Japan and Singapore, with 192), compared with the lowest-ranking (Afghanistan, on 26) according to the Henley Passport Index, the biggest gap in its 17-year history.

The year Zanzibar launched a new tax and residency programme for expats to live and invest in the Tanzanian island. Real estate investors are now able to acquire a residency permit as an investor, meaning they can live in Zanzibar as a non-citizen (although this is not required).

2021

The number of passports provided to date by the St Kitts and Nevis citizenship by investment scheme, the world’s first when it launched in 1984.

20,000

147k

The minimum investment in US dollars required to gain citizenship for a family of four in Antigua and Barbuda.

£2m

The minimum sterling investment needed to acquire UK residency, but only after five years. £10 million shortens the wait to two years – one of the most expensive schemes in the world.

1bn

The drop in international arrivals in 2021, down 72% on 2019. Every destination had some level of restrictions in place in 2020 with around three-quarters closing their borders completely to international tourism.

Sustainability needs to be integrated into client portfolios

Pierre-Yves Lombard

FOR MORE ATTITUDES SURVEY RESULTS, VISIT OUR ONLINE DATABANK





Taxing times

It's not just headline-hungry politicians and socialists who believe the wealthy should pay more tax: some millionaires are also volunteering to do just that. Andrew Shirley meets the woman who has helped convince them



Erica Payne, unlike some who campaign for the wealthy to pay more tax, doesn't have an existential problem with people being rich. In fact, she's happy to admit that she'd like to be richer herself. What the Washington DC resident does have a problem with is people with lots of money not paying their "fair share", especially when social issues are on the rise in the US.

"We're in a situation right now, Andrew, where we're at historic levels of inequality," she tells me. "That inequality has an unbelievable human cost: 2.5 million people addicted to opioids, life expectancy going down for segments of our population, deaths of despair, deaths due to alcohol, suicide and drugs at the highest point they have ever been since people started recording them."

What also frustrates her is her fervent belief that the tax system in her country, and others, is rigged in favour of the wealthiest. "I am happy for them to be rich. We simply want them to do what we ask every other person in the world to do. Be a part of our society, do your fair share, don't try to skirt your responsibilities, and don't spend a whole bunch of your money manipulating the political system."

Examples she uses in the book *Tax the Rich*, which she co-authored with Morris Pearl, a former BlackRock executive and an unashamed millionaire, include the treatment of returns from private equity investments, much lower rates of tax on capital gains from investments than on earned income and the ability to pass on wealth untaxed via the inheritance tax system.

There are plenty of economists who would disagree with her case for higher taxes, but she and Pearl, who has also joined our Teams call, are battle hardened, neatly batting away the counter-arguments as quickly as I can reel them off.

People will move elsewhere if they are taxed too much: "Millions of people live in New York City and make money here, even though we have higher tax rates than almost any place else in the world." The wealthy already pay the most tax: "When you have US\$250 billion, for your burden to feel similar to mine you need to

be taxed at a very high percentage." Wealth "trickles down" and creates a lot of employment: "The people who create jobs for all the Apple workers are all those who line up to buy a new iPhone." The wealthy give a lot to charity: "It's easy to raise millions of dollars to build a new concert hall, but we also need other things like sewage treatment plants and schools."

Despite her book's provocative title – and it's an equally lively read – it's certainly not a socialist manifesto. For starters, Payne's not interested in anybody who earns less than US\$1 million a year and/or doesn't own assets worth at least US\$5 million.

And she doesn't mind hanging out with millionaires. So much so that after finding herself "infuriated" with President Obama during his "lame duck" session of Congress in 2010, when it "became clear that he was going to cave in to Republican demands to extend the Bush tax cuts", she decided to form a group called the Patriotic Millionaires that would, instead, campaign to actually be taxed more.

How, I wonder, did she persuade the 200 or so members of the group to join? It does sound a bit like the proverbial cliché of asking turkeys to vote for Christmas. "It absolutely was a tough sell – there were a lot of millionaires I talked with who refused to join. Even a lot of the 'progressive'



ones get significantly less progressive when it comes to actually asking them personally to pay more. But luckily there were enough that saw how important this issue is and got on board."

Pearl, who is the chair of Patriotic Millionaires, says his epiphany came during a business trip to Greece. "I walked over to the window during

this due diligence meeting with lots of bankers. I thought I was looking out at a parade, but it turned out to be a riot.

"I just decided then that I could do more for my children and grandchildren by advocating for changing government policies than I could by making another few million dollars for them.

I really believe that if we don't change course, they're not going to grow up in the kind of country where I grew up."

"Morris likes to say that he doesn't do this out of the kindness of his heart," Payne adds. "He's just as selfish as other millionaires – he's just selfish for a different kind of country; one that requires him to pay more in taxes."

"I think everyone should be a millionaire. It's great, you should try it too. I just think that those of us who have the good fortune to be millionaires should pay the same tax rates as people who get a paycheck every week with tax deducted from it, that's all," agrees Pearl.

Joe Biden looks increasingly likely to lose control of both Congress and the Senate in November's mid-term US elections, and his prospects of winning another term in office also hang in the balance. It seems unlikely, therefore, that the Patriotic Millionaires' proposals, which include a billionaire's income tax and equalising the tax rate on every dollar of income over US\$1 million, will come to pass any time soon.

But Payne insists that politicians should be wary of looking at the issue along party lines. "Public polls have shown that the vast majority of Americans believe that millionaires and billionaires do not pay high enough taxes, and 71% of them think the economy is rigged against them." For his part, Pearl warns ominously of revolution.

Payne has to jump off our call for another meeting, but says she'd love to take one last question. Should the rich be worried about what you are trying to achieve? She responds without hesitation: "They should embrace it. They should be excited. They should be so thrilled to be champions of a rich world for them to be rich in."



US Congresswoman Alexandria Ocasio-Cortez makes a statement at the 2021 Met Gala in New York

**They should embrace it.
They should be excited.
They should be so
thrilled to be champions
of a rich world for them
to be rich in**



Unsustainable *luxury*

The luxury industry is making big strides to meet the climate challenge, but rising affluence and ambitious global emissions targets leave governments with few choices but to step in to curb consumption, warns Liam Bailey

About 18 months ago, luxury developer Mike Spink had an unusual meeting with a wealthy young European client. “We spent the two hours discussing their project’s mechanical and electrical services specification, which they’d read cover to cover,” he says during a recent phone call. “They were incredibly engaged in the detail, and from the outset had demanded that sustainability was the top priority. The issue of cost wasn’t even raised.”

The meeting was unusual because for the past 25 years Spink’s clients have rarely shown much interest in the sustainability credentials of their homes. On the odd occasion when they did mention it, the steer would be to do something sustainable provided the cost was paid back in lower energy bills. Yet in the past two years, Spink has noticed more of his clients seeking to ensure their homes have a significantly reduced impact on the environment.

Anecdotes don’t make for data, but in recent weeks during conversations with close to a dozen of the world’s top architects and developers I’ve heard similar stories. There is a growing, committed pool of buyers asking questions spanning energy efficiency, embodied carbon and the sustainability of materials.

This is welcome, but the timing demonstrates how slow luxury residential property has been on the uptake. Commercial developers have been under intense pressure for years now from investors, occupiers and regulators to embed environmental standards into the bricks and mortar product as part of wider environmental, social and governance (ESG) investment criteria.

The residential world has not come under the same pressure. Affordability trumps all

other concerns in the wider housing market, and for wealthy buyers who often own multiple properties, location, design and detailing are the focus. Some developers, like Spink, have innovated and installed heat pumps and other green infrastructure anyway, but there has been little push from purchasers until now. The government’s confusion over how to approach the issue means there’s been little regulatory impetus either.

Yet a reckoning may be coming, at least if the Paris Agreement climate goals are to be taken seriously. A 2021 report from the Hot or Cool Institute confirmed that high-income countries must reduce lifestyle carbon footprints by 93% by 2050, with even middle-income countries needing cuts of up to 80% to meet targets. It’s impossible to square this with the current rate of change, and the implications extend well beyond property to every industry that commands a slice of luxury spending.

LUXURY HAS A SUSTAINABILITY PLAN

The fashion and travel sectors were proactive in anticipating the issue as a systemic threat to their business models, and their journeys provide clues as to where real estate is likely heading. Both remain serious emitters but have been pushed to understand how they can help to save the planet and, in doing so, guarantee their own survival.

Fashion houses have made sweeping changes to their operations including swapping planes for ships to move goods, investing in virtual showrooms, supporting certification to set environmental standards, and moving

There is a growing, committed pool of buyers asking questions spanning energy efficiency, embodied carbon and the sustainability of materials

into recycling and upcycling. After spending years burning unsold goods to protect their rarity, leading brands are in a race to carbon-neutral status. Ultimately, the industry is moving towards a future of fewer collections, designed to be owned for longer.

For consumers in the luxury travel sector, you might think that flying to distant locations for holidays is a bad thing to do, but even here the industry has a plan: travel less frequently but stay for longer. Dial down the weekend breaks and enjoy two-week stints in the sun or snow with an easier conscience.

The read across to real estate is clear. Forward-thinking developers are already taking strides in the technical aspects of energy efficiency and the sustainability of materials, and increasing numbers are placing these as central tenets in their marketing strategies.

Challenging as these changes are, they are low-hanging fruit compared with the next problem – longevity. Like fashion’s drift towards fewer collections, or travel’s move towards fewer flights, ▶





the next phase in the industry's green evolution will centre on how to encourage less consumption altogether. It is pointless ensuring properties are packed with sustainable materials if each subsequent homeowner tears out the interiors to match the latest design trend.

THE PROBLEM WITH EXPONENTIAL GROWTH

Let's assume the industry finds answers to these questions. The newly eco-aware wealthy consumer can fill their large, environmentally friendly first and second-home portfolios with lots of beautiful things, while knowing that the environmental impacts of their choices have been kept to a minimum. Is that enough?

Not when you consider emissions targets, because even these improvements are just tweaks to the model. After all, you're still flying to Gstaad, even if you are staying for longer when you get there.

The kicker here is that demand for luxury isn't static. Right now only some people get to live in big houses, travel widely and buy lots of

nice things, but many more people want the same opportunity. The global economy has a good track record of turning this desire into reality (for more on this, turn to page 14).

The numbers demonstrate quite how unsustainable luxury lifestyles are becoming, and housing is a central part of the problem. Homes of wealthy Americans are responsible for nearly 25% more greenhouse gas emissions than those in lower income brackets, according to a 2020 study published by the US National Academy of Sciences (NAS). Some of the richest suburbs in the United States have carbon footprints 15 times the size of less affluent neighbouring districts.

The problem is bigger than housing. The world's richest 1% are responsible for more CO₂ emissions than the poorest 50% of the world's population, according to the 2022 World Inequality Report from the World Inequality Lab. Unfortunately, the trajectory is going in the wrong direction: a 2020 report from Oxfam and the Stockholm Environment Institute confirmed that, over the past 25 years, emissions from the richest 1% have grown three times faster than emissions from the poorest 50%.

Right now only some people get to live in big houses, travel widely and buy nice things, but many more want the same. The global economy has a good track record of turning this desire into reality

The aviation industry is a standout example. Stefan Gössling of Lund University notes that almost 90% of people globally never fly; so if you do, you are part of a global elite. Even if the elite were to follow the advice of the luxury travel industry to travel less frequently and stay for longer, say, halving their flights, aviation emissions would still rise five-fold if the rest of the world were to enjoy this more "limited" freedom to fly.

A similar pattern has already played out in the car market. The International Energy Agency confirmed in January that sales of aspirational sports utility vehicles (SUVs) rose 10% in 2021, accounting for more than 45% of all global car sales and setting a record in terms of both volume and market share. The clamour to own one means SUVs rank among the top causes of CO₂ emissions growth over the last decade.

If these trends continue, all the impressive improvements made by the luxury industry become irrelevant as far as climate goals are concerned, leaving policy intervention as the inevitable route for legislators.

THE POLICY RESPONSE

What that response looks like will depend on whether global governments can work together to form a unified strategy. Some of the most radical solutions are also the simplest – if there is a finite number of tonnes of CO₂ the world can emit, then every tonne of emissions one person consumes means someone else needs to reign in their emissions to compensate. This is where ideas like personal carbon trading come to the fore, where governments place a ceiling on the carbon available for individual consumption.



"There is a sense that at some point the tax system needs to be more effective in taxing carbon consumption and until now politicians haven't been prepared to go down that route," David Gauke, Lord Chancellor under Theresa May and now Head of Public Policy at MacFarlanes told me in a conversation before Christmas. "I don't expect that to change imminently, but if opinion continues to move in this direction then I think the case for carbon taxes becomes stronger."

The benefit of a carbon tax is its neatness. For home buyers looking to do the right thing, it

provides a mechanism to answer key questions such as whether to prioritise minimising the annual energy consumption of a home or the embedded carbon in the building itself. A properly designed carbon tax should help to signal where effort is best directed.

As Gauke says, "it's a broad-based, consistent and unified system," but it's unclear whether it is achievable. There is still no agreement over the unified carbon pricing that would be required to make this kind of policy truly effective, and a key takeaway from COP26 was that there is little hope that major emitters like China will sign up any time soon.

All this points to more fragmented policy-making. In the US, for example, there would need to be a rapid shift to smaller homes in denser settlements if the country is to meet its climate obligations, according to recommendations in the NAS report. That has obvious implications for luxury homes.

Does this route lead to frequent flyer taxes, mansion taxes or land value taxes to encourage the occupation of "minimal" space, or even bans on multiple home ownership? The UK already asks you to confess to existing property ownership when buying an "additional property", so why not simply say you can't buy another?

Gauke agrees that governments will always be tempted to impose taxes on high value things as a form of gesture politics, but notes that such measures tend not to raise much money and can also push wealth out of the countries that impose them. But they could begin to look attractive as political cover, as the real cost of shifting economies in a greener direction starts to hit voters in their wallets.

Gauke thinks it's unlikely, but evidence of this thinking was inadvertently leaked by the UK government in November 2021 when a blueprint to change public behaviour appeared alongside the government's net zero strategy. The document, produced by the behavioural insights team, or "nudge unit", emphasised that tackling the climate crisis requires "significant behavioural change" and floated levies on high-carbon food and a reduction in frequent flying. Within hours, it had been withdrawn.

The luxury industry, like many others, is working on the premise that product innovation will keep the show on the road, but legally binding emissions targets suggest something much more radical could be on the horizon. Unless there is progress on carbon taxes soon, the risk of sweeping policy imposition is rising, and these policies risk being partial, overly complex and destined to fail.

In the absence of coherent policy, purchasers such as Spink's clients will be the main driver of change and on that front change appears to be afoot. But will it be too little, too late? Spink welcomes the shift in priority but says there needs to be much greater urgency to drive change at scale both by lowering carbon output and, even more so, by making buildings that will stand the test of time. He recalls over-hearing conversations among the wealthy about optimising wealth preservation.

"Imagine if you replaced that with obsessing over your carbon footprint," he says. "You'd need to see that level of enthusiasm to really move the needle."

There needs to be much greater urgency to drive change at scale, both by lowering carbon output and, more so, in making buildings that will stand the test of time

HEAR MORE OF LIAM'S THOUGHTS ON THE ISSUES DISCUSSED IN THE WEALTH REPORT ONLINE





Fast forward:

The *final* property frontier

In 2021, Richard Branson became the first billionaire to reach the edge of space, followed 11 days later by Jeff Bezos, reigniting the Space Race. But what does this renewed interest in the final frontier mean for property and the planet? Flora Harley finds out

A NEW VIEW: Space Perspective's *Spaceship Neptune*

Space Perspective will take eight explorers and a pilot above 99.9% of the Earth's atmosphere using a balloon the size of an American football stadium. The first flight is scheduled for late 2024 and tickets currently cost US\$125,000.



HEAD ONLINE TO DISCOVER MORE ABOUT WHO OWNS SPACE AND WHAT THE OPPORTUNITIES ARE



T

he concept of space tourism took a giant leap towards becoming reality in 2021. Its potential, however, is currently limited not only by cost – tickets on a Virgin Galactic flight start at US\$450,000 – but also by the necessity to embrace an element of danger and to tolerate high g-forces. Overcoming such challenges will open up opportunities for investment, real estate and the planet.

A MATTER OF TIME

“Space is dangerous,” says Dr Nikodem Szumilo of the Bartlett Real Estate Institute, one of the first academics using data to explore the economics of space. “Yet it’s just a matter of time before more take on the challenge of this risky, high-octane destination. After all, people dive with sharks.”

“When the Antarctic first opened up to the public, people flocked there. Space is no different. More private citizens flew to space in 2021 than in the whole of previous spaceflight history,” affirms Jane Poynter of Space Perspective.

The business aims to make space more accessible by offering what it describes as “a gentle flight in a pressurized capsule propelled by a spaceballoon”, as well as pitching prices at a more affordable level.

A NEW PERSPECTIVE

The billionaire space race has garnered some criticism from those who believe resources would be better targeted at solving problems on Earth – but mass space exploration could help save the planet, believes Poynter.

“The opportunity to view the world from space enables one to connect intensely with our planet and the singular human family that inhabits it,” she says. “It broadens perspectives and creates a deep commitment to social and environmental causes.”

Her words were echoed by Amazon’s Jeff Bezos, the second billionaire in space. Speaking at last year’s COP26 climate change conference in Glasgow, he proclaimed: “Looking back at Earth from up there, the atmosphere seems so thin, the world so finite and so fragile. We must all stand together to protect our world.”

ROOM ON THE MOON...

So what are the implications for real estate? Will we see hotels and other buildings in space and on the Moon? Perhaps not for a while. “It costs billions of dollars to build an orbital space station and hotel, and would cost many more to construct a hotel on the Moon,” says Poynter. “The full value of that real estate is still to be realised, and we cannot yet imagine the enormous opportunities.”

We won’t be booking a room in space for some time yet, agrees Szumilo. “On average it takes five years to develop a satellite. A hotel might take ten to develop and five to launch. I think it will be 30 years until we see hotels in space and at least 50 years for the Moon.”

VALUING SPACE

How does one value space in space? “There have already been some high value transactions – including the US\$683 million paid in 1996 for a specific satellite broadcast location for five years – but currently real estate in space is not what people think,” says Szumilo, whose research has focused on the space occupied by satellites, a sector dominated by TV companies in the past.

“The real challenge is understanding where value will be created and where demand will concentrate. Currently the density of satellites is dictated by the density of the population on the planet.” Looking ahead, Szumilo believes that it is likely that human and economic activity on Earth will determine the footprint in space in the same way.

OUR FUTURE VIEW...

We were slightly ahead of the curve when we predicted commercial space flights by 2015 in the 2014 edition of *The Wealth Report*, as well as measuring the value of asteroids, but in 2021 we are edging closer to the possibilities. Our timeline now looks like this:

- 2025** Commercial space tourism begins
- 2075** First hotel room on the Moon
- 2117** The UAE’s city on Mars opens – see page 81 for more

CHAPTER TWO

Investing

Unwrap the multiple drivers and trends steering global investment and commercial property markets that will shape decisions now and post-Covid

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UHNWI perspectives on the investment trends shaping 2022

POWER TO THE PEOPLE

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Private capital is driving real estate investment. We share the numbers

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High street and metaverse retailing form a new hybrid





Building blocks

To kick off the Investing chapter of *The Wealth Report*, Flora Harley delves into the latest results from the Attitudes Survey to discover what UHNWIs are currently thinking when it comes to crypto, private equity and real estate



18%
of UHNWIs now own some kind of cryptocurrency

CRYPTOMANIA

It would be tempting to say, given the constant slew of media headlines, that 2021 was the year that crypto investments went mainstream.

The sector's growth was certainly eye-watering. According to *The Economist* magazine, the global value of cryptoassets was US\$2.4 trillion at the end of 2021, a 12-fold increase since early 2020. There are now more than 8,000 cryptocurrencies in circulation for investors to choose from, as well as myriad non-fungible tokens (NFTs) available to buy.

Despite a rollercoaster 12 months, Bitcoin saw its value increase by 60% in 2021 – not to mention becoming legal tender in El Salvador, the first, and so far only, country to adopt it – but that pales into insignificance compared with the performance of other less known currencies.

Anybody, for instance, taking a punt on the so-called “Dogecoin Killer” Shiba Inu coin at the beginning of the year would have seen a return of 43,000,000%. It sounds like a joke, but 12 months later it had accumulated a market cap of US\$40 billion.

It all seems a far cry from 2018, when *The Wealth Report* first explored the potential of blockchains, the building blocks of cryptocurrencies and NFTs. Back then, more than a third of Attitudes Survey respondents



11%
have invested in NFTs

doubted their clients had even heard of them and just 14% reckoned blockchains would significantly influence how wealth was managed.

This year, according to the Attitudes Survey, 18% of UHNWIs now own some kind of cryptocurrency or token, and 11% have invested in NFTs (see page 86 for more). That, however, is still far from the ubiquitous levels that real estate and equity investments enjoy. Mainstream? Perhaps not quite yet.

A third of survey respondents said security concerns were behind their reluctance to invest: unsurprising perhaps, given the record US\$14 billion of crypto crime committed in 2021, according to blockchain analytics firm Chainalysis. But the biggest stumbling block – cited by over 60% – is that UHNWIs still don't understand the market sufficiently well to feel confident enough to jump in.

Volatility is also a significant concern, although for many traders that is the main attraction. However, to focus too specifically on the often crazy worlds of cryptocurrencies and NFTs risks missing the more substantive potential emerging opportunities offered by the digital revolution, such as decentralised finance and Web3 (a decentralised version of the worldwide web based around blockchains).

Indeed, some 61% of our Attitudes Survey respondents now see blockchain technology as an increasing opportunity for their clients.

61%
believe that blockchain technology is an increasing opportunity

PRIVATE PROPERTY

Another dominant investment theme is the growing role of private capital in markets. This looks set to continue, with 79% of our Attitudes Survey respondents viewing private equity/venture capital as an increasing opportunity for wealth growth and preservation.

The private capital industry reached US\$7.4 trillion by the end of 2020, according to Morgan Stanley, and is expected to hit US\$13 trillion by 2025. Global venture investment, which covers everything from early “seed” funding to more mature start-ups, hit an all-time high of US\$643 billion in 2021, according to investment data analyst Crunchbase. That's nearly 100% more than was invested in 2020, and about 20 times more than in 2002. Special-purpose acquisition companies (SPACs) in particular grabbed the headlines last year, not always for the right reasons.

79%
view private equity/venture capital as an increasing opportunity

Real estate remains a cornerstone of many UHNWI investment portfolios accounting, on average, for 27% of investable wealth, according to the Attitudes Survey. As William Matthews, Knight Frank's Head of Commercial Research, points out, property occupies a unique position somewhere between bonds and equities.

“It enjoys the upside of rising rents and values in times of economic expansion, but also security of income during times of volatility. These dual attributes will be particularly desirable over the medium term, in which we expect to see a continuation of the current global economic recovery coupled with the unknown impact of monetary policy normalisation running at different speeds around the world.”

Real estate, says Matthews, also offers a benefit of specific relevance today – the potential to act as an inflation hedge, partly through the ability to raise rents. “Although this argument is sometimes lazily applied to all real estate,

when the reality is that only certain assets will act as a true inflationary hedge, with the appropriate research it is still possible to identify sectors – and individual buildings – that can provide protection against the ravages of rapidly rising prices.”

UHNWI real estate investors have tended to invest directly into bricks and mortar, but this is changing with 20% planning to make indirect investments via the likes of funds and real estate investment trusts (REITs) in 2022, according to the Attitudes Survey.

“Investing by way of funds and/or REITs allows for exposure with greater diversification and reduces the need for direct management,” says Ian Whittock, Chief Investment Officer at Knight Frank Investment Management. “In addition, indirect investing can improve liquidity but is dependent on both the scale of the fund and the timing,” he adds.

“The price for liquidity comes in the form of a discount or premium to net asset value. When the prospects for the market are strong, shares usually trade at a premium and when weak, at a discount. The discount will invariably be larger when the liquidity is needed. This pricing of the paper asset can therefore introduce more short-term volatility, although over the long term the returns from directly owned property and indirect investments are not dissimilar.”

The one question we should perhaps have asked in the Attitudes Survey was what role respondents believe the emerging metaverse will play in their clients' investment strategies. It is, after all, a place where, as we discuss at the end of this chapter, private capital, digital investments and real estate can collide spectacularly.

Are you ready?

27%
of investable wealth is directly allocated to real estate

TURN TO PAGE 40 FOR A LOOK AT REAL ESTATE INVESTMENT OPPORTUNITIES GLOBALLY

Power to the people

UHNWIs set the pace in the world of real estate investment last year. Antonia Haralambous of Knight Frank's commercial research team reveals the latest numbers and shares our forecasts for cross-border flows in 2022

Last year was a record 12 months for private capital investment into commercial real estate. Despite the pandemic and continued economic uncertainty, private investors spent close to US\$405 billion, a 52% increase on 2020 and 38% above the pre-pandemic five-year average. This far outweighed the rebound in volumes recorded by institutional investors, which collectively increased investment by 29%, just 6% above the five-year pre-pandemic average.

Despite the impressive levels witnessed in 2021, we expect 2022 to reach even greater heights. Close to a quarter of our Attitudes Survey respondents say their clients are planning to invest directly in commercial real estate this year, while 20% of respondents are expecting them to invest indirectly, through real estate investment trust (REITs) or debt funding. Eco-investing, inflation and asset rotation, we believe, will be the key investment drivers this year.

DRIVING ACTIVITY

The need to address the "E" in environmental, social and governance (ESG) will drive capital flows towards green-rated buildings and those assets with the potential to be repurposed and refurbished to become "green" (see page 43 for more on this trend).

Meanwhile, inflation is currently at decade highs across the UK, US and the eurozone. While many believe that higher inflation should be transitory, some investors view real estate as an inflation hedge,

meaning that an inflationary environment is likely to boost investment demand.

Lastly, asset rotation – when investors sell buildings and deploy the proceeds elsewhere – could be a significant driver behind assets coming to the market in 2022. Assuming a typical five-year hold period, properties purchased in 2017 could begin to be marketed this year. Transactions were 11% above the long-term average that year, meaning that we could expect a higher volume coming to the market in 2022.

The level of asset rotation is likely to be elevated even further as some assets purchased in 2016 or earlier could have been held back from sale due to the pandemic, boosting the likely volume of supply.

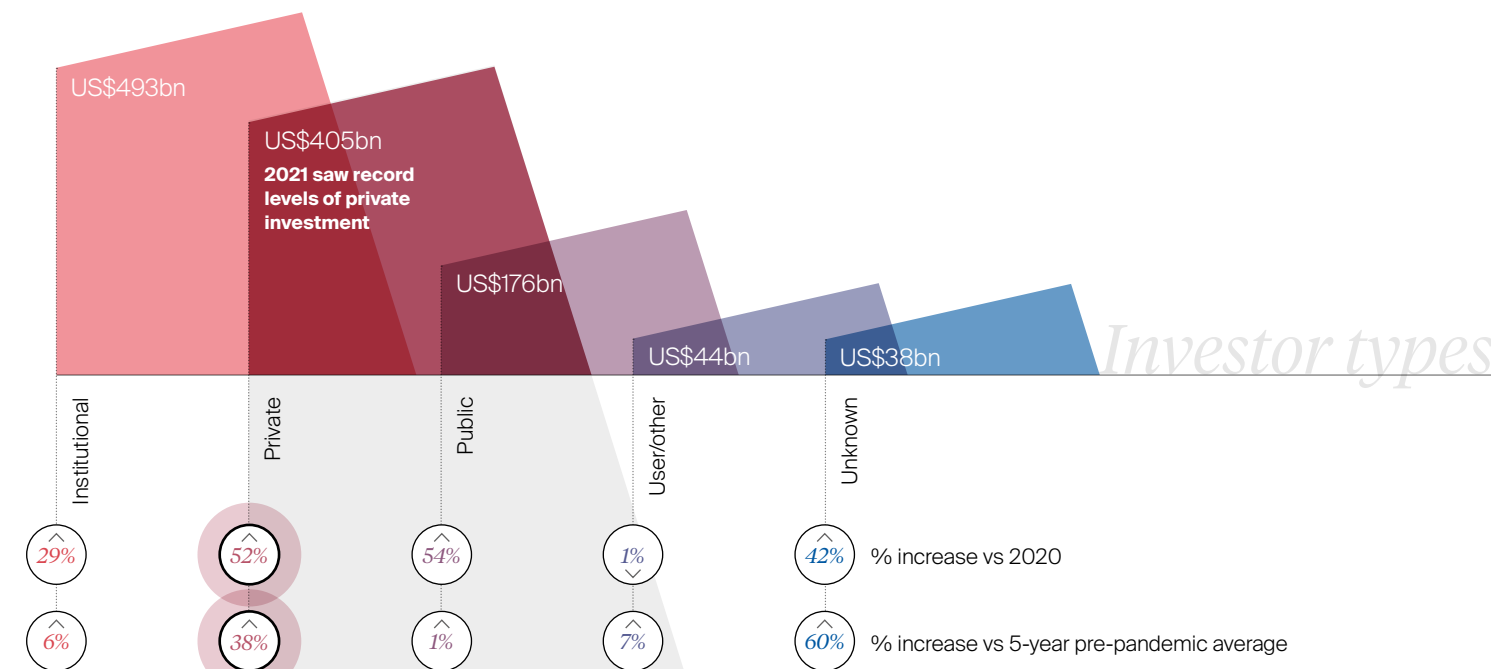
Eco-investing, inflation and asset rotation, we believe, will be the key investment drivers this year

FORWARD THINKING

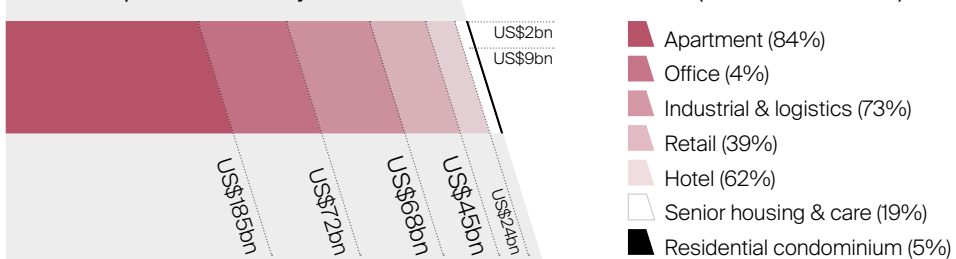
We are therefore confident that investor sentiment is largely positive towards commercial property for the year ahead. However, we also have the ability to isolate and forecast where we think private investors will spend their money in 2022 and beyond. ▶

Global investments

Total volume invested in global real estate in 2021, by investor type

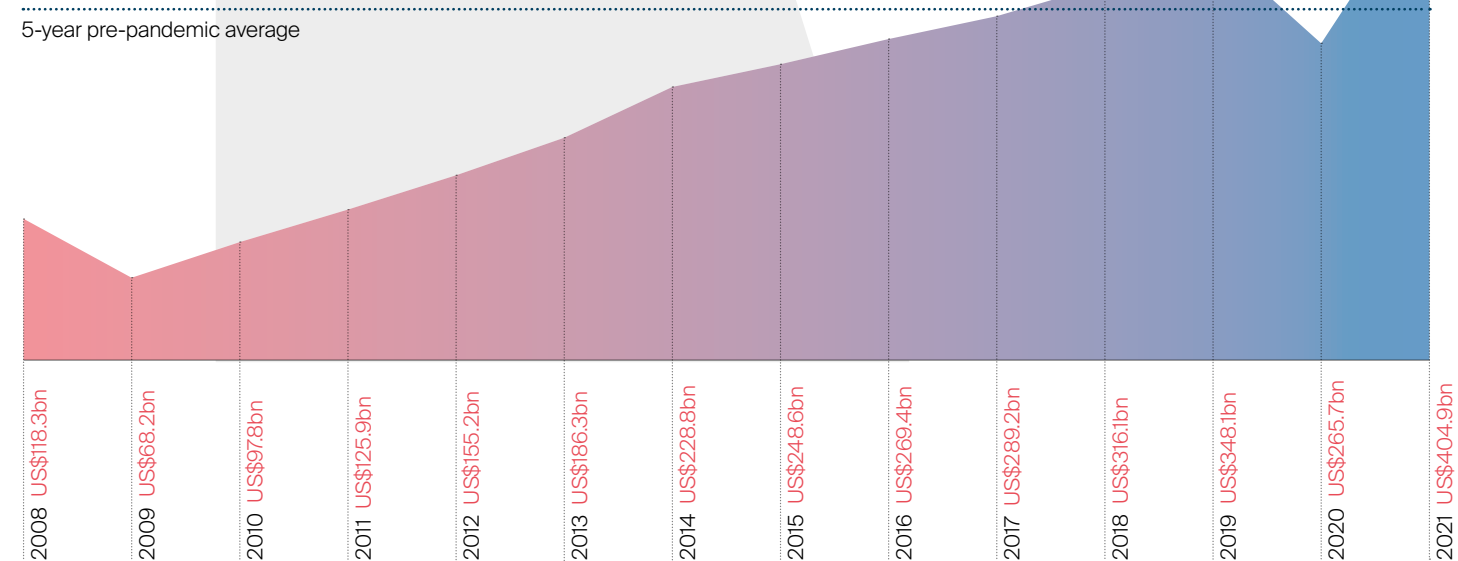


Private capital investment by sector



Going private

Total investment volumes from private capital since 2008

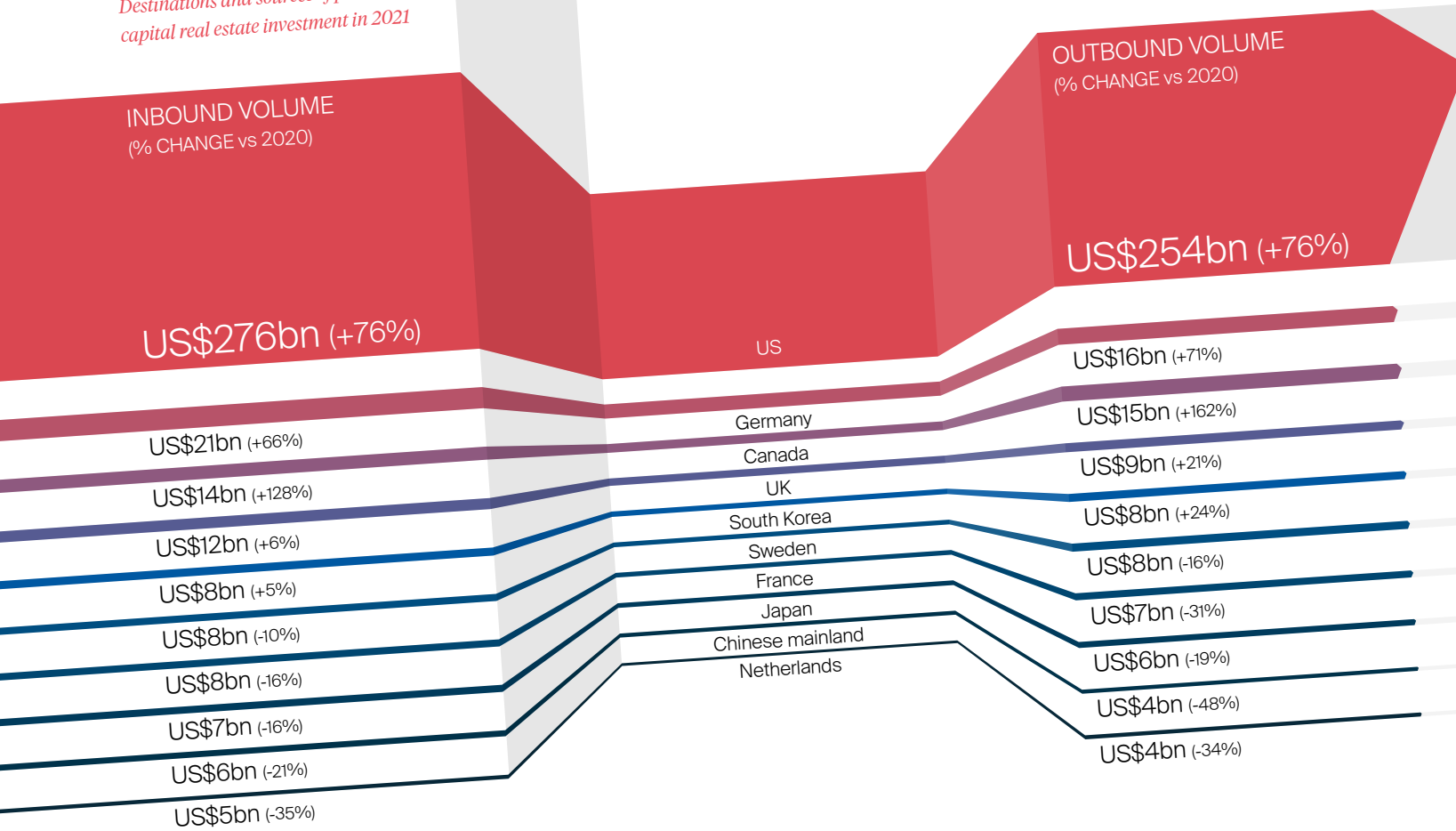


Source: RCA



Top 10s

Destinations and sources of private capital real estate investment in 2021



Our Capital Gravity Model predicts inbound and outbound cross-border investment flows into commercial real estate on a global scale, with sector and investor type specificity.

Overall, we predict that 2022 will be a record year for global cross-border investment. The story also holds true for private cross-border capital, which is also expected to reach new peaks in 2022, representing a quarter of all investment activity. While we do expect to see investment volumes build further over the next few years, 2022 is likely to see the sharpest rise in activity. Here, investors will have the opportunity to rebalance portfolios, execute business plans and implement strategic goals.

SOURCES AND TARGETS

The US, according to our forecast, will be the largest source of cross-border private capital in 2022, with 74% of the global total. Private investors from the UK, Canada, Switzerland, Spain, Israel and Austria are also expected to be very active in 2022.

Private capital is likely to be most focused on the office sector, which we predict will receive roughly 43% of all private cross-border investment. This is followed by industrial and logistics with a 17% share and residential, accounting for 16%.

For UHNWIs in particular we expect a lean towards these asset classes again next year, but also anticipate a greater focus on more

An untapped opportunity

There is just under £1 trillion of investable commercial property in the UK, according to the Investment Property Forum. But of that only half is considered to be owned for investment purposes. And even then, only around 12% is traded each year, although this varies by sector.

Specialist sectors (35%) – such as residential, hotels or senior living – and industrial (22%) saw a greater proportion of assets traded in 2021, while offices (7%) and retail were well below the average. This is not just a feature of UK commercial real estate. In Australia, across the six capital cities, just 5% of office buildings and 13% of industrial stock were traded last year.

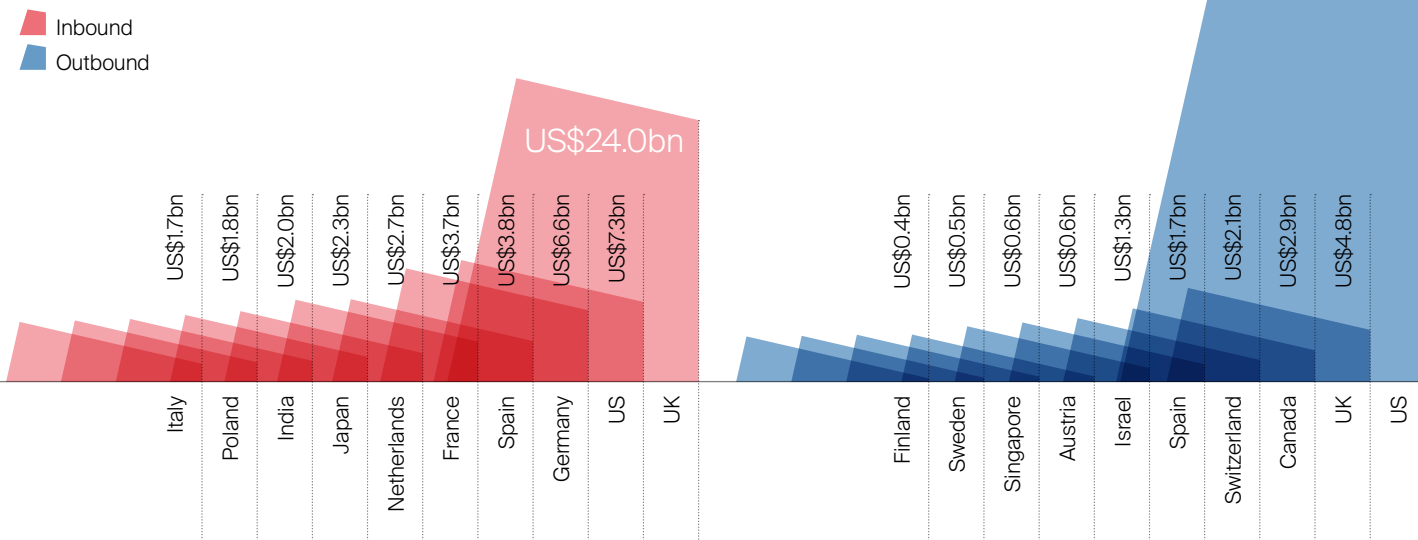
The fact that commercial property comes to market relatively infrequently, combined with our forecast for sustained high demand, means that through their businesses and other investments, UHNWIs are potentially sitting on highly sought-after and underutilised assets.

In fact, sale-and-leaseback transactions have become an increasingly popular option for corporates over the past few years. In 2021, over US\$37 billion of sale-and-leaseback transactions occurred globally. These transactions enable property owners to sell the asset to an investor who then immediately leases the premises back to the vendor. The vendor becomes the tenant and receives the capital previously tied up in the real estate. They can then use this equity for further investment, expansion or to strengthen balance sheets.

With sale-and-leaseback transactions, vendors can unlock 100% of the value of the asset, instead of the 60% or so they might receive through a commercial mortgage. And unlike a bank loan, the capital generated would not have to be repaid. Sale-and-leasebacks are also tax efficient, as rental costs are typically offset as an operating expense and can be deducted in full, whereas with conventional loans, only interest payments are tax deductible. Therefore, UHNWIs who own these assets could use this method to unlock equity, while retaining the real estate for their business needs.

Future gazing

Top ten destinations and sources of forecast cross-border private capital in 2022



Sources: RCA, Knight Frank Research Note: Based on largest flows only and may not represent all flows into or out of each market

2022 will be a record year for global cross-border investment by private capital

specialist sectors. The Attitudes Survey revealed that 40% of respondents were becoming more interested in the healthcare sector, while 28% were more interested in retirement living, followed by 26% in data centres and 23% in both life sciences and student housing.

Our Capital Gravity Model places the UK as the top destination for overseas private investors in 2022, attracting 37% of total private cross-border investment, followed by the US with 11%. Germany, Spain and France are the remaining destinations to feature in the top five.

As highlighted by our "Inside wealth" panellists (page 18) real estate is increasingly seen by UHNWIs as an opportunity. The flurry of activity in 2021 clearly demonstrates their appetite and our forecasts show that this will remain

undimmed in 2022. The growth in retail REITs and blockchain technologies will also see a greater exposure towards the sector by more of the population. The confluence of digital and physical real estate, however, will be one to watch: see page 46 for more on this.

TO SEE OUR OUTLOOK FOR GLOBAL REAL ESTATE INVESTMENT HEAD TO OUR ACTIVE CAPITAL REPORT





Around the world in 25 themes

With 23% of UHNWIs planning to invest directly in commercial property in 2022, according to our Attitudes Survey, *The Wealth Report* asked Knight Frank's global network to identify some options for private capital in their markets. From salmon farms to pubs, and everything in between, here's a round-up of their suggestions

SINGAPORE

LEONARD TAY, HEAD OF RESEARCH, KNIGHT FRANK SINGAPORE

In urbanised Singapore, many real estate opportunities take the form of city-type buildings with high-intensity use. As such, private investors might be drawn instead to the historical charm of the city's limited inventory of low-rise **conservation shophouses**. These unique properties can be used for family office space, or leased to businesses including retail and food & beverage for recurring income in areas that have been gentrified or are undergoing gentrification.

Strata office units (where individual office space within a building can be bought and owned) in the CBD could also be popular. These units, totalling only about 17% of total office stock, will be useful in the post-pandemic office era where smaller and more flexible office space will feature.

AUSTRALIA

BEN BURSTON, CHIEF ECONOMIST, KNIGHT FRANK AUSTRALIA

Green hydrogen production, supported by federal and state investment, has the potential to make a substantial contribution to the clean energy transition while underpinning a new export industry. Australia has identified



262,000 sq km of coastal land suitable for hydrogen production, more than enough to meet the Hydrogen Council's predicted global demand for 2050.

Growing government support for the sector, including through federal funding to make childcare more affordable, has increased the attractiveness of **childcare centres** as an asset class.

Pubs provide strong lease covenants and reliable income streams, and those located in attractive lifestyle destinations are underpinned by high land values with substantial upside potential, given the positive outlook for domestic tourism post-lockdown. The market is highly fragmented with limited institutional involvement, so is more accessible for private capital.

UAE

JAMES LEWIS, MANAGING DIRECTOR, KNIGHT FRANK MIDDLE EAST & AFRICA

Agritech and **aquaculture** are booming in the Middle East. Due to climate constraints, the Gulf region usually imports 80% of its food. Abu Dhabi is investing US\$100 million in four agritech companies, the first stage of a larger US\$272 million agritech support programme. Dubai-based Fish Farm, launched in 2013, produced 600 tonnes of salmon in 2020, rising to 1,000 tonnes in 2021 and eventually to more than 10,000 tonnes a year.

Covid-19 has also driven what appears to be a permanent shift in online shopping habits across the region, significantly ramping up demand for **distribution warehouses**. With this dynamic expected to not only persist but intensify, industrial warehouse assets have never been more popular.

HONG KONG

MARTIN WONG, HEAD OF RESEARCH & CONSULTANCY, GREATER CHINA

As per the city's 2021 Policy Address, the concept of the **Northern Metropolis**, which involves the development of an IT hub near the border with mainland China, construction of up to 186,000 homes and a new cross-border railway linking the city to the Qianhai (see page 61) economic zone in Shenzhen, has drawn a lot of investment interest from both developers and private investors. Industrial assets and commercial mixed-use developments in particular offer opportunities going forward.

FRANCE

DAVID BOURLA, CHIEF ECONOMIST & HEAD OF RESEARCH, KNIGHT FRANK FRANCE

Vineyards are of interest with the French wine market seeing a healthy rise in exports. In the first half of 2021, France exported 7.3 million hectolitres of wine, 15% up on the first half of 2019, according to Vitisphere. There are wine-growing land groups, such as ATREAM, that specialise in vineyard investment.

Another opportunity for sustainability-conscious investors is **forestry**, which has a relatively low entry point from €2,000 per hectare.

CHINESE MAINLAND

REGINA YANG, HEAD OF RESEARCH & CONSULTANCY, KNIGHT FRANK SHANGHAI & BEIJING

Healthcare assets – including larger assets such as medical research and life sciences facilities



and smaller assets such as medical centres and pharmacies – will benefit from long-term structural tailwinds such as ageing populations and a rise in healthcare spending.

Healthcare is fast becoming the next sector in mainland China to attract significant amounts of investment from private equity, representing around 41% of deals by number and 20% by value in 2020, according to StepStone.

NEW ZEALAND

CHRIS FARHI, HEAD OF INSIGHTS, DATA & CONSULTING, BAYLEYS REAL ESTATE

In the residential space, **build-to-rent, waterfront properties** and **3-in-1 conversions** (the ability to build three properties) all offer opportunities.

In addition, **self-storage units** are offering value through the underlying land. These assets typically have high occupancy levels, with the potential for strong income and capital growth.

Many are looking to **leisure and hospitality** as it will form the second part of the post-pandemic recovery. Hotels, tourism businesses and golf resorts all look interesting.

INDONESIA

SYARIFAH SYAUKAT, SENIOR RESEARCH ADVISOR, KNIGHT FRANK INDONESIA

The pandemic has created the opportunity to increase the agricultural productivity of **arable farmland** around secondary cities and there are prospects for further growth.

There is a lot of interest in **digital infrastructure**, such as data centres and micro-fulfilment and central fulfilment centres in metropolitan areas.

Growth potential is very high as the global economy continues to digitise, and returns are often less correlated to the business cycle than traditional infrastructure assets such as airports, ports and toll roads.

CZECH REPUBLIC

ONDŘEJ VLK, HEAD OF RESEARCH & CONSULTANCY, KNIGHT FRANK CZECH REPUBLIC

Retail parks proved to be pandemic-proof thanks to their tenant mix and open layout, which enabled them to stay open even during lockdown, and investors seem to appreciate that. **Logistics** is the product that everyone wants, but rarely gets traded, which helps yield compression, but in combination with rental growth still represents good investment opportunities.

TAIWAN

ANDY HUANG, RESEARCH DIRECTOR, REPRO KNIGHT FRANK

We are starting to see **industrial zones** located outside of the CBD in Taipei. There is a specific lean to constructing **prime offices** generally and these are attracting a lot of investment. **Urban renewal** is becoming more popular, especially in the CBD with old offices being converted into prime housing through the application of government subsidies offered to those renovating unsafe buildings.

KENYA

BEN WOODHAMS, HEAD OF KNIGHT FRANK'S AFRICA DESK AND FORMER MD KNIGHT FRANK KENYA

Assisted living for the elderly has not been common in much of Africa, but we are currently seeing a substantial investment in this sector as the concept catches on. We are also expecting a series of **data centres** to be developed close to the geothermal springs of the Great Rift Valley – the power-hungry facilities making use of geothermal energy produced by the volcanic activity in the region.

GO ONLINE FOR FURTHER ADVICE AND INSIGHT FROM OUR TEAMS TO THOSE LOOKING TO INVEST IN THEIR MARKETS





Flexi time

As the world of work changes, the wants and needs of office occupiers are transforming too. Lee Elliott presents the opportunities ahead for those private investors willing to understand and respond to these changing demands

The way we work has undergone profound change since the onset of the Covid-19 pandemic. While some of this is undoubtedly temporary and will be reversed as restrictions are lifted, there remains a clear desire for greater flexibility.

We are witnessing the rising popularity of hybrid working – whereby work is undertaken in a range of settings including (but not restricted to) the office and employees' homes. Indeed, in a late 2021 survey of almost 2,000 global C-suite leaders, KPMG found that 73% anticipated hybrid working styles emerging within their business; yet only a third had actually implemented a change. Clearly, there is some road to run and hybrid working will be a consistent theme during 2022.

As Ben Burston, Chief Economist at Knight Frank Australia, notes, "some large organisations have found that the binary choice of working from home or at head office is insufficient. These companies are turning to service providers to support flexibility with network membership solutions or smaller private suites to provide options to their staff."

Insights from colleagues point to a similar picture across the globe. In Singapore, Leonard Tay confirms that "more corporates are adopting hybrid forms of working that sometimes include the adoption of access to co-working spaces for employees."

Of course, changing workstyles tend to be reflected in the workplace. Despite stories calling into question the very survival of the office, occupiers have not taken a knife to their portfolios. Instead, they are focused on shaping their offices to reflect emerging wants and norms. "Hot-desking is becoming more popular in Hong Kong, but is not expected to lead to a drop in demand for traditional office space," points out Martin Wong.

"When the pandemic first hit Kenya, the serviced office sector was hit hardest due to short-term licences, so occupiers simply opted to work from home," notes Ben Woodhams. "Now, as the sector recovers, it is that flexibility that occupiers want, and so we are seeing a huge growth in occupation by serviced offices."

Market activity – although still below pre-Covid benchmarks – is on the up. Our *Active Capital* research anticipates offices to be the most heavily invested property asset class globally in 2022, building on strong momentum in 2021.

However, this does not mean that things will stay the same. The sector will see structural change as occupiers take flight to quality, seeking spaces that are compelling to a workforce that has greater choice in where they work.

Amenity-rich offerings will be a focus. The office will become a centre for collaboration and innovation and this will be reflected in the configuration and utilisation of space. There is fledgling evidence of these changes already, with much more to come as we move from pandemic to endemic and occupiers lift the brakes on their property decisions accordingly.

Five key implications for private investors:

1. The flight to quality will generate more polarised market conditions. Quality assets will be competitive, and private investors may benefit from being more innovative and visionary in recognising the opportunity to bring older, off-prime pitch assets to a higher standard.
2. Offices are increasingly becoming an operational asset class. This may play to many private investors who have a history and understanding of operational real estate, such as hotels. As offices become as much about the experience they present to users as they are about the environment they offer, greater investment will need to be made into the service layer and amenities on offer.
3. The growing occupier focus on service leaves many investors worried about their ability to deliver an amenity-rich environment without impacting on net lettable, and therefore incoming-producing, space. Investors are looking

outside the asset to consider the richness of amenity in the immediate surroundings. With foresight, private investors have an opportunity to spot emerging, amenity-rich submarkets.

4. As working styles become more flexible, so too do offices and office leases. In an uncertain post-pandemic period this quest for flexibility will intensify and the experiences of the global co-working phenomenon will also ensure flexible product is available. Private investors need to be comfortable with more operational elements within the office itself, but also have to recognise that long-term, stable income from entire offices is much more difficult to achieve.
5. Private investors will need to become more customer-centric and build relationships and rapport with their customers to a greater extent than has historically been the case. Customer understanding and responsiveness will be key to securing income over the longer term.



Future proofing

The *Wealth Report* has been following the growing importance of ESG – environmental, social and governance – to UHNWIs, with this year's Attitudes Survey revealing that four out of five are interested in ESG-related property investments. Flora Harley looks at the motivating factors and the barriers to entry

WE ASKED OUR GLOBAL NETWORK HOW ESG IS INFLUENCING PRIVATE INVESTORS' THINKING ABOUT PROPERTY. HERE ARE A FEW TAKEAWAYS:

Singapore: Banks and lending institutions are starting to mandate ESG compliance across recognised international and industry-wide standards when granting loans for development.

UK: Our latest *Active Capital* research found that prime central London offices rated "Excellent" by BREEAM enjoy a 10.5% premium on sales prices compared with equivalent unrated buildings.

Australia: While the focus on ESG provides opportunities, it also presents risks – private investors who take a passive approach and delay necessary upgrades to meet evolving environmental standards may find this impacting on asset performance.

Indonesia: Interest is growing among investors in water and energy efficiency, with increasing recognition that more efficient buildings tend to stay in use for longer, without the need for renewal.

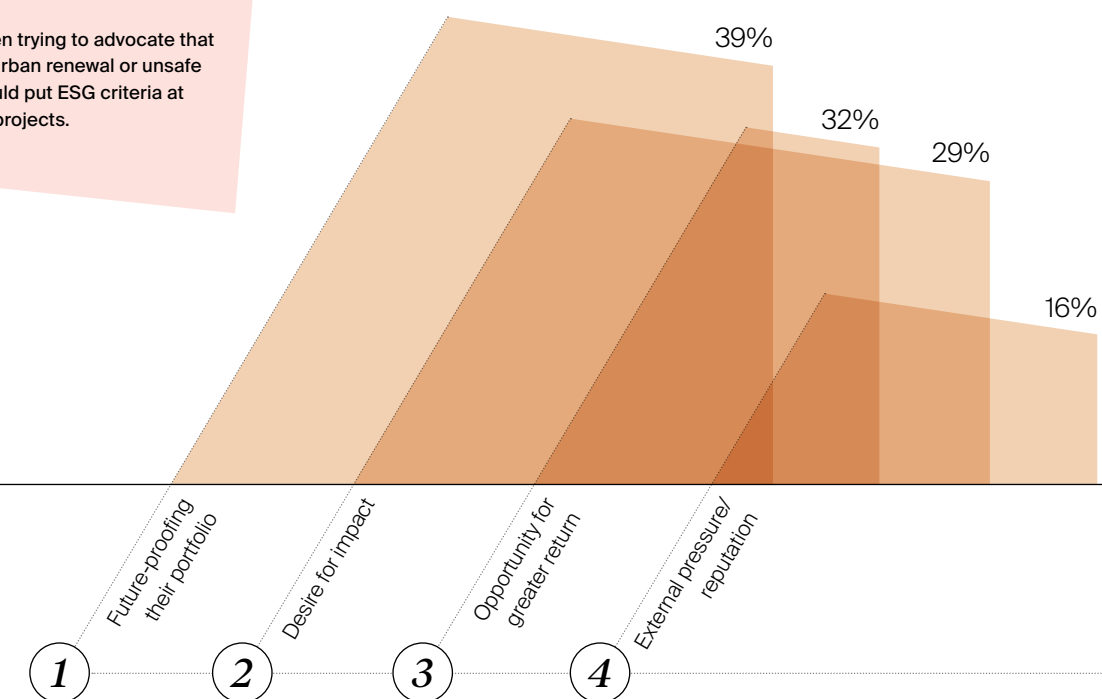
Taiwan: The government has been trying to advocate that developers operating within the urban renewal or unsafe reconstruction programmes should put ESG criteria at the heart of their reconstruction projects.



ESG attitudes

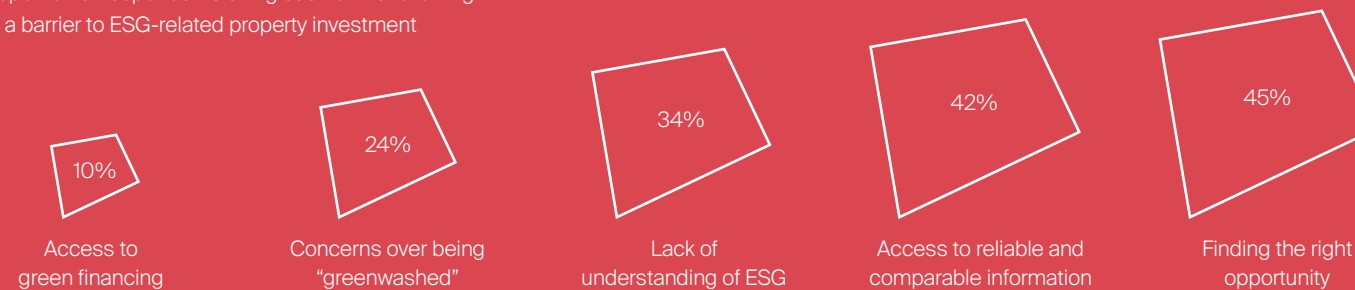
Driving factors

Key drivers for ESG-related property investments (% of respondents and then weighted by rank of importance)



Stumbling blocks

Proportion of respondents citing each of the following as a barrier to ESG-related property investment





The *ultimate* investment

Hannah Jones, CEO of the The Earthshot Prize, tells Andrew Shirley why Prince William's ambitious clarion call to the globe's green innovators could help to save us all from environmental catastrophe

Solving environmental, social and governance (ESG)-related problems is nothing new for Hannah Jones. She spent more than 20 years working for Nike, including a stint as the leisurewear giant's first Chief Sustainability Officer, before taking up her new role last year.

"Nike was one of the first companies to get into sustainability. As we went on the journey, one of the things that became very clear was that it wasn't going to just be about trying to make the business less bad," says Jones who, when we speak, is just back from both the inaugural Earthshot ceremony and the COP26 climate change talks in Glasgow.

"We were going to need new ways of thinking and new business models, as well as innovations across supply chains, processes and materials. Everything would need to be rethought in terms of sustainability. That's when I fell passionately in love with the role of innovation as an agent of change," she explains.

It seems obvious that innovation on a huge scale is key to tackling climate change and many of the other environmental issues affecting the world, but progress wasn't being made quickly enough for the UK's future monarch and ardent conservationist Prince William. The Earthshot Prize was his solution, and Jones' experience made her the obvious choice to lead it.

"It was honestly a no brainer," she says, when I ask why she decided to jump on board. "The first round of lockdowns gave me time to think about how I wanted to spend the rest of my life. I felt very clear that I wanted to spend it working to help the world become more sustainable in whatever way I could."

But how, I wonder, will Earthshot, which invites entrepreneurs, NGOs, companies, cities and even governments to submit ideas to solve five environmental issues (see panel), make a difference?

"We have less than a decade to make decisive changes to how we live our lives, run our economies and build communities and sustainable livelihoods. What we collectively

The first round of lockdowns gave me time to think about how I wanted to spend the rest of my life

EARTHSHOT CATEGORIES

- Protect and restore nature
- Clean our air
- Revive our oceans
- Build a waste-free world
- Fix our climate



Selected *finalist* fact files



Enapter

WINNER: Fix our climate

Born on a climate-change affected South Pacific island, Vaitea Cowan co-founded Enapter, which now has bases in Germany, Thailand and Italy, to turn back the tide. Just three years on, its green hydrogen technology could change the way we power our world. Enapter's AEM Electrolyser technology turns renewable electricity into emission-free hydrogen gas. Developed quicker and cheaper than once thought possible, the technology is already fuelling cars and planes, powering industry and heating homes.



Takachar

WINNER: Clean our air

Globally, US\$120 billion of agricultural waste is generated every year. What farmers cannot sell they often burn, with catastrophic consequences: in some areas, air pollution has cut life expectancy by a decade. Takachar, a social enterprise set up by New Delhi resident Vidyut Mohan, has developed a cheap, small-scale, portable technology that attaches to tractors in remote farms. The machine converts crop residues into sellable bio-products like fuel and fertiliser, reducing smoke emissions by up to 98%.



WOTA BOX

FINALIST: Build a waste-free world

Nearly 40% of the world's population is on track to experience "water stress" by 2050. WOTA, a Japanese start-up, wants to improve water security by helping people reuse wastewater. Founded in 2014, the company's first product, WOTA BOX, converts more than 98% of water waste into clean, fresh water. Fifty times more efficient than conventional water treatment plants and far smaller, it can be delivered at scale and requires no existing infrastructure.

have to do is understand how to support innovations that have real potential as solutions."

Jones says almost 800 projects around the world were put forward for the 2021 prize, and while the prize money – £1 million per category – grabbed the headlines, the support that winners will receive from business experts and potential investors, such as Michael Bloomberg, is arguably the bigger win. "Often innovators face a lonely challenge to get their ideas off the ground. We are creating support networks for eco-innovators around the world."

She also hopes the initiative will help investors and companies, who often complain it is hard to access genuinely green opportunities or supply chains. "We think that we can play a really

pivotal role in connecting the dots and creating what is almost like a marketplace of potentially hundreds of eco-innovations, all of which will go through our vetting process."

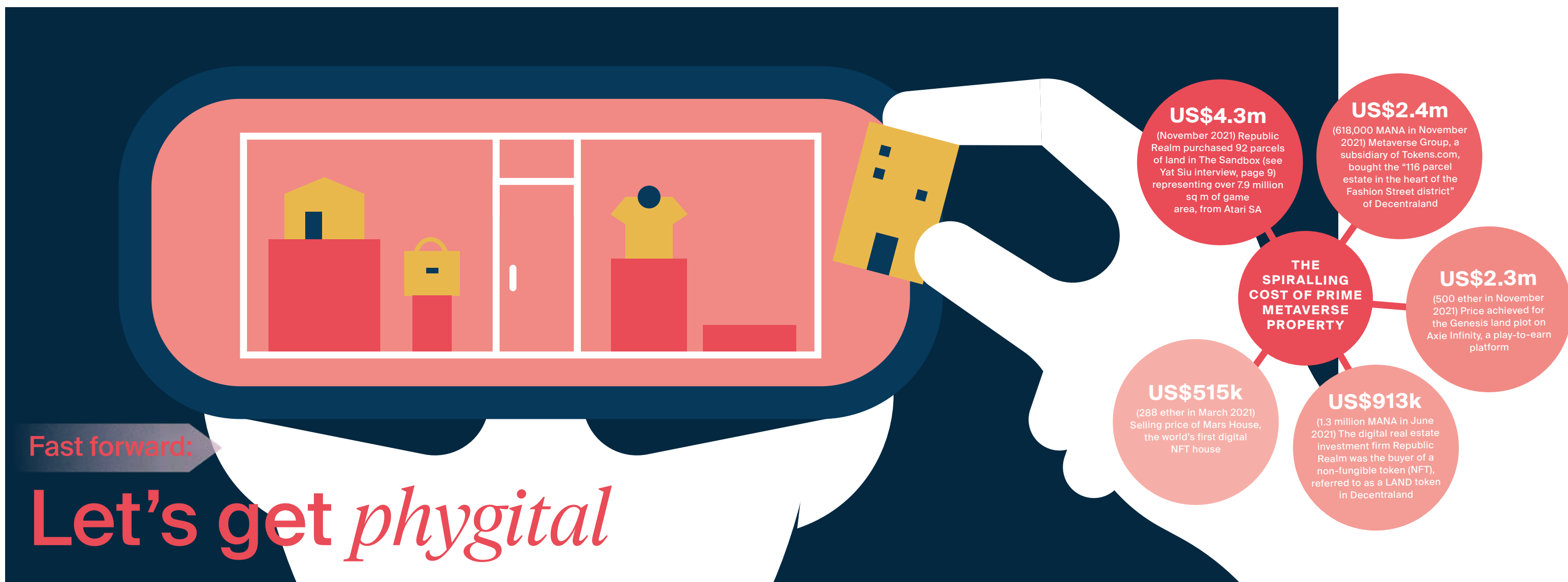
Key, of course, to Earthshot's long-term success is the enthusiasm and unrivalled access of its Royal patron, but Jones' skill at incubating, accelerating and scaling innovation will play a vital role in a decade that she says is crucial to the future of the Earth and everything that lives on it.

"Obviously policy matters, but taking those innovations to scale is going to tip whether or not we face waking up on 1st January 2030 facing disasters and crisis, or whether we are actually on a pathway to change."

We have less than a decade to make decisive changes to how we live our lives

MEET THE WOMAN SAVING INDONESIA'S CORAL REEFS





Brave new world or digital dystopia? Whatever your view, the metaverse has been unleashed and is being touted as a multi-trillion dollar investment opportunity. We explore the retail opportunities available at the confluence of physical and digital real estate

Metaverses have been around for a number of years, but it was Facebook's decision last year to rebrand as Meta – along with Mark Zuckerberg's pronouncement that he wanted to create a new virtual world for users – that saw awareness rocket.

For the uninitiated, our interview with metaverse entrepreneur Yat Siu on page 9 will shed some light on where value lies in these digital realms. But how do they relate to the physical world and property, in particular retail?

VALUE IN DIGITAL INNOVATION

"The metaverse in terms of experiential brand culture will mark a major switch from

storytelling to 'story' living," comments Katie Baron, Director of Retail, Brand Comms & Media at trends intelligence agency Stylus.

"Drest, for example, blends gaming, social networking and e-commerce. Players become stylists via a virtual array of replica luxury goods from over 200 luxury brands, with added scoring elements for each."

The interplay of digital and virtual comes where anything trialled in-game, such as clothing and other branded merchandise, can also be bought in real life. "There's a very strong correlation between what's played with and what's bought," explains Baron. "Another example is ADA, which offers extensive customisation toolkits where players create avatars that inhabit personal rooms. Players can decorate the rooms themselves and can view and virtually try on clothes and accessories from participating brands."

"The metaverse will increasingly offer luxury brands the opportunity for innovation and trialling new ideas or items," points out Stephen Springham, Head of Retail Research at Knight Frank. "It opens them up to new audiences and creates a more versatile and valuable brand. In addition the metaverse offers huge opportunities to collect and analyse shopper data, which will increase brand value."

In future, shoppers will increasingly interact with brands virtually. Consumers anywhere will be able to visit digital flagship stores and, by creating their own styles, even make brands aware of new trends.

However, the metaverse opportunities with the greatest potential for entrepreneurs and investors are not necessarily added sales channels for physical goods but, as we discussed earlier with Yat Siu, the immense

value in digital assets. While this will depend on how much value consumers ascribe to their digital identities, Baron highlights an example of a digital Gucci bag selling for 162% more than its "real-world" price in the fashion brand's Gucci Garden centenary exhibition partnership with Roblox.

"Brands can create entirely fictional spaces as a secondary revenue stream," adds Baron.

SEAMLESS EXPERIENTIAL BLEND

Retail in the digital space has long been part of our lives, yet during the Covid-19 pandemic online shopping became standard and brands increasingly, and some might say belatedly, embraced an omnichannel presence. "The online, metaverse and physical stores need to be seamless and complement each other,"

stresses Springham. "They should be part of integrated thinking and are not binary, all adding to the brand."

Baron agrees: "We're already so far into the phygital (physical, digital and social media domains) era that thinking in terms of separate entities is untenable."

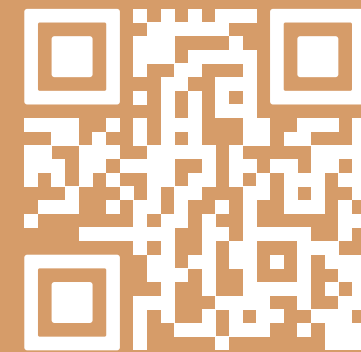
So it seems those investors concerned that the metaverse might spell the end of physical retail assets can rest somewhat easier. As Springham notes, even Meta won't be retreating solely into a digital world.

"Facebook has announced its intention to have stores showcasing its virtual reality technology. Post-pandemic, people enjoy getting out and not being stuck at home, but we have definitely seen a shift to the experiential. Perhaps we will see larger stores that offer both elements – or a bigger and better experience," he says.

CHAPTER THREE

Home

Uncover the latest insights and analysis
on prime global residential property
performance now and in the future



THE HEAT IS ON

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Prime house prices post
record global growth with
Dubai out in front

PRIME PREDICTIONS

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We ponder where next for the
world's luxury residential markets

HOME HOTSPOTS

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Handpicked neighbourhoods
set to outperform over the
next five years

HOMES OF THE FUTURE

66

Marrying functionality with
sustainability... and fuzziness



The *heat* is on

Luxury residential markets around the world enjoyed a red hot 2021. Kate Everett-Allen takes the temperature of our unique Prime International Residential Index, which tracks price performance in 100 key city, sun and ski locations

So, what was all the fuss about last year? Simply put, luxury homes became the asset class of choice for UHNWIs. In 2020, housing markets ceased trading for months at a time, freezing like a deer in the headlights. But come 2021 they started to race away as vaccine rollouts gathered momentum and the uncertain global economic climate started to recede.

The value of the Knight Frank Prime International Residential Index (PIRI 100) increased by 8.4% in 2021, up from just under 2% in 2020 and its highest annual increase since the index was launched in 2008.

Of the 100 luxury residential markets tracked, only seven saw prices decline in 2021 while a staggering 35% of locations saw them increase by 10% or more, underlining the strength of the sellers' market during the pandemic.

FEELING WARM

It wasn't just the temperature that sizzled in Dubai last year. Prime prices accelerated 44.4%, sending the Emirate, where the mercury regularly hits 40 degrees in the summer, to the top of our PIRI rankings. See our deep dive on page 52 for an explanation as to why.

With growth of 42.4%, Moscow wasn't too far behind, with Russia's mortgage subsidy programme and tight supply fuelling price growth, albeit temporarily. San Diego (+28.3%), Miami (+28.2%) and The Hamptons (+21.3%) make up the rest of the top five.

Overall, the Americas were the regional top performer, accounting for six of the top ten rankings and posting average growth of almost 13%. Although Asia-Pacific (+7.5%) outpaced EMEA (+7.2%), this was largely driven by Australasia (+12.3%). Asia alone managed a relatively modest rise of 5.5%. ▶

What's *driving* demand?

- Low interest rates and the availability of cheap finance
- A shortage of prime stock
- Rising wages and accrued savings in lockdowns
- Strong equity market performance and record bonuses
- A reassessment of housing needs and lifestyles
- More flexible working patterns
- Wealth creation – 5 million new millionaires in 2021 globally
- The appeal of property as an inflation hedge

Average annual change by *market type*

City

+8.4%

TOP 5
Dubai
Moscow
San Diego
Miami
Seoul

Sun

+10.2%

TOP 5
Dubai
San Diego
Miami
The Hamptons
San Francisco

Ski

+7.2%

TOP 5
Aspen
St Moritz
Verbier
Chamonix
Megève

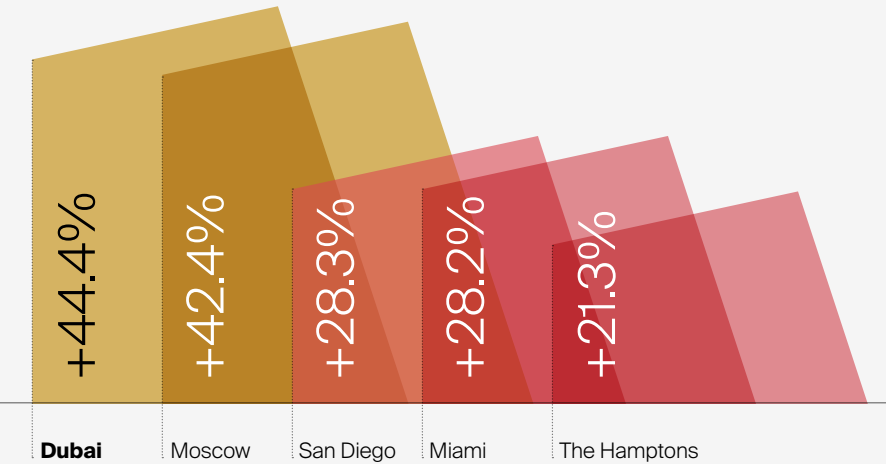
Source: See bottom right



Prime International Residential Index (PIRI 100)

Annual change in luxury residential prices in 2021

Top 5



Average annual change by *world region*

Americas

+12.7%

TOP 5
San Diego
Miami
The Hamptons
Toronto
San Francisco

EMEA

+7.2%

TOP 5
Dubai
Moscow
Jersey
St Moritz
Amsterdam

Asia-Pacific

+7.5%

TOP 5
Seoul
Taipei
Gold Coast
Shanghai
Sydney

1-20	21-40	41-60	61-80	81-100
44.4 Dubai	15.0 Mustique	8.9 Beijing	4.9 Rio de Janeiro	2.0 Barcelona
42.4 Moscow	15.0 St Barts	8.8 Houston	4.7 Berlin	2.0 Brussels
28.3 San Diego	13.8 Riyadh	8.6 Edinburgh	4.7 Megève	1.7 Lisbon
28.2 Miami	12.0 Wellington	8.0 Chamonix	4.5 Frankfurt	1.6 Dublin
21.3 The Hamptons	12.0 Algarve	8.0 Provence	4.3 Shenzhen	1.3 Courchevel
21.0 Seoul	12.0 Mallorca	7.2 Hong Kong	4.1 Cannes	1.3 London
20.3 Toronto	11.7 Vancouver	7.2 Porto	4.0 Lake Como	1.2 Bucharest
18.9 Taipei	11.4 Guangzhou	6.5 Jeddah	4.0 Milan	1.0 Méribel
18.6 San Francisco	11.2 Brisbane	6.3 Paris	3.8 Gstaad	1.0 Sardinia
18.5 Los Angeles	10.8 Stockholm	6.3 Tokyo	3.5 Singapore	1.0 Phuket
18.0 Jersey	10.5 Perth	6.2 St Tropez	3.3 Vienna	0.3 Bengaluru
17.1 Gold Coast	10.2 Verbier	6.0 Lucca	3.0 Florence	0.3 Mumbai
17.0 Cayman Islands	10.0 Ibiza	6.0 Lausanne	3.0 Madrid	0.0 Delhi
16.7 Aspen	10.0 Monaco	5.8 St Petersburg	3.0 Rome	-0.2 Cape Town
16.5 St Moritz	10.0 Zurich	5.6 Saint-Jean-Cap-Ferrat	3.0 Val d'Isère	-0.4 Jakarta
16.5 Shanghai	9.8 Athens	5.5 São Paulo	3.0 Mexico City	-0.9 Kuala Lumpur
16.2 Sydney	9.8 Auckland	5.0 Barbados	2.6 New York	-1.5 Manila
15.5 Boston	9.5 Oslo	5.0 British Virgin Islands	2.6 Oxford	-3.6 Bangkok
15.2 Amsterdam	9.4 Melbourne	5.0 Marbella	2.4 Nairobi	-8.0 Marrakesh
15.0 Bahamas	9.0 Geneva	5.0 Venice	2.1 Cyprus	-8.2 Buenos Aires

Sources: All data comes from Knight Frank's global network with the exception of Berlin and Frankfurt (Ziegert Research & ImmobilienScout 24); Tokyo (Ken Corporation); New York (StreetEasy); Boston, Los Angeles, Miami, San Diego, San Francisco (S&P CoreLogic Case-Shiller); Jersey (States of Jersey); Toronto (Toronto Real Estate Board); Vancouver (Vancouver Real Estate Board); Mexico (Sociedad Hipotecaria Federal); São Paulo and Rio de Janeiro (Fundação Instituto de Pesquisas Econômicas); Stockholm (Svensk Mäklarstatistik AB) Notes: Price changes are measured in local currency and correspond to the period between 31st December 2020 and 31st December 2021 unless otherwise stated. Aspen, Auckland, Berlin, Cyprus, Frankfurt, Hong Kong, Houston, Jersey, Mexico City, Riyadh, Taipei, The Hamptons, Tokyo and Wellington to Q3 2021. Boston, Los Angeles, Miami, Porto, San Diego and San Francisco to October 2021. New York, Rio de Janeiro and São Paulo to November 2021. Tokyo – relates to all properties above ¥100m. Data for Dublin, Moscow, Singapore and St Petersburg is provisional



Key trends in 2021

- **Cross-border flows altered course:** US interest in Europe increased, Middle Eastern demand in the US and Europe picked up, but outflows from Asia remained muted.
- **Surge in cash buyers:** With borders mostly closed and equities performing strongly, cash-rich buyers ploughed funds into domestic housing markets as a means of wealth preservation during a period of heightened uncertainty.
- **Supply constraints:** The pandemic has exacerbated already limited levels of prime supply in key cities including London, Singapore, Sydney, Los Angeles, Palm Beach, Geneva, Toronto, Zurich and even Dubai.
- **Second home focus:** Rural, alpine and waterfront retreats in Europe, the US and Australasia remained in demand, posting their strongest rates of price growth since before the financial crisis.
- **Co-primary living boost:** The use of second homes for longer periods – first identified in 2020 – was supercharged in 2021 as flexible working grew and homeowners looked to decamp for several weeks to claw back lost time with family and friends.
- **Conversion of digital nomads:** Locations such as Barbados, Dubai and The Cayman Islands that offered short-term welcome visas in 2020 saw some renters convert to buyers in 2021.
- **Smaller cities in demand:** Whether Venice, Edinburgh or Florence, easily accessible, culturally rich cities proved popular.
- **Expat re-evaluation:** Prime tenancies picked up in London and New York as corporate relocations started to recover and outflows from developing economies back to advanced markets continued.

CITIES SHINE

Although sunshine resorts from Miami to the Gold Coast shone bright in 2021, with prices climbing 10.2% on average, it was cities that provided the year's curveball.

Overlooked in 2020 as suburbs and resorts attracted those looking for space to hunker down during the pandemic, the city bounced back in 2021, averaging price growth of 8.4%. Covid-19, it would seem, hasn't triggered the ongoing flight from bustling urban centres that some were predicting, although as we discuss below it is still influencing purchasing decisions.

Even ski resorts, which have in recent years posted fairly frosty results, saw average growth climb to 7.2% in 2021. Aspen, St Moritz and Verbier were the top performers.

From villas in the south of France to townhouses in London and from bungalows in Singapore to large waterfront plots in Sydney, the race for space, as mentioned above, continued in 2021. Average house prices in prime central London grew 3.2% in 2021, compared with 0.5% for apartments. However, motivated by value, apartment sales were recovering by the final quarter of the year, albeit for those with a roof terrace or outdoor space.

The concern is that this quest for room to breathe comes at a time when new homes are shrinking. New data from the US Census Bureau shows the median floor space of an apartment fell to less than 1,000 sq ft in 2021, the lowest since records began in 1999. With a significant lag in construction, larger homes are likely to generate a premium for some time to come.

COOLING DOWN

With house prices accelerating – and with large pandemic-induced deficits to plug – we saw more governments intervene in 2021 to curb price inflation.

New Zealand, South Korea and the UK were among the first to raise interest rates, although these moves had little impact on house prices. All eyes are now on the Federal Reserve's four mooted rate rises for 2022. While this may dampen global buyer sentiment, a stronger dollar could also boost US outflows.

Aside from the intervention of central banks, 2021 also saw cooling measures deployed but this was largely tinkering around the edges, the trailer to the main show that will launch in 2022.

Dubai *rising* through the ranks

Following seven years of negative price growth and with overall prices still 30% below their 2014 peak, the Emirate's relative value came into focus in 2021.

The UAE's handling of the pandemic, strong take-up of the vaccine, the delivery of high-end turnkey projects as well as innovative new visa initiatives and economic reforms, all combined to boost Dubai's profile in the eyes of international buyers.

The top end of the market has been particularly active: sales above US\$10 million have historically accounted for 2% of all transactions; in 2021 that figure rose to 7%.

FAISAL DURRANI,
KNIGHT FRANK MIDDLE EAST

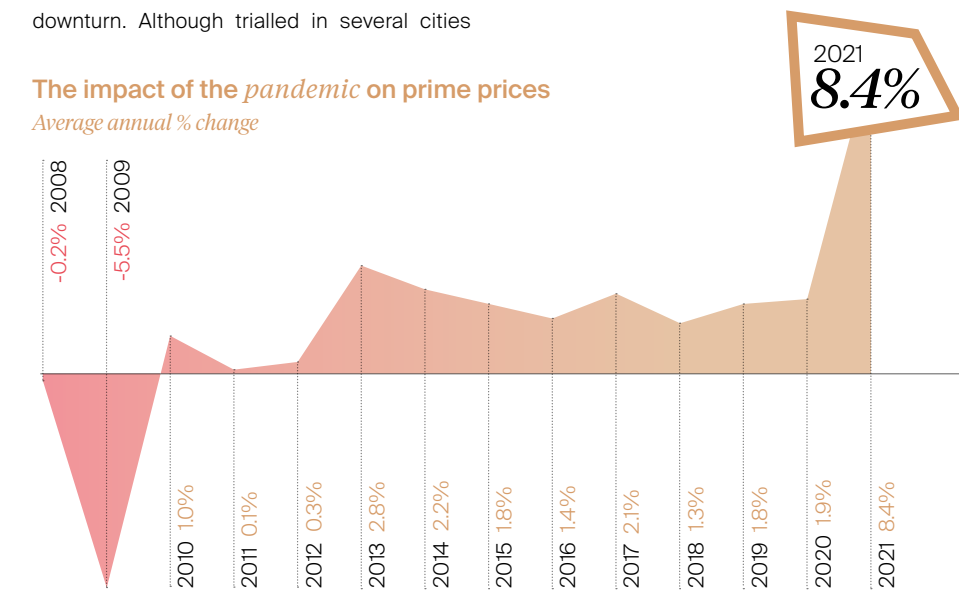


Why does the price performance of luxury homes matter?

Despite economies turning increasingly digital and less tangible, property, the oldest asset class of all, still dominates. The world has never been wealthier, and property's role as a store of wealth has never been greater. Almost a third of the wealth held by UHNWIs is stored in their primary and/or secondary residences according to our Attitudes Survey. The extent to which these assets rise or fall in value not only influences personal levels of wealth, but the decisions to enter or exit a market with repercussions for the flow of wealth around the world.

The impact of the pandemic on prime prices

Average annual % change



Source: Knight Frank Research

The world has never been wealthier, and property's role as a store of wealth has never been greater

In the same way that the pandemic has heightened global inequality, the property bounceback that followed was far from uniform. Advanced economies (+8.9%) outperformed developing markets (+7.3%) in 2021. Omit Dubai and Moscow and the latter notched up just under 5% growth.

Not only were lockdowns more draconian in advanced markets, but with a larger cohort of professional workers able to work from home, they were able to accrue larger savings pots, some of which was reinvested back into bricks and mortar.

In the US, household wealth amassed during the pandemic totalled US\$28 trillion, according to Oxford Economics.

Bonnieux, Provence





Relative values

The number of square metres of prime property
US\$1m buys in selected cities

Location sq m/US\$1m

Monaco	14.6
Hong Kong	21.3
London	30.6
New York	33.3
Singapore	35.4
Geneva	37.1
Sydney	41.4
Shanghai	42.0
Los Angeles	42.2
Paris	42.3
Beijing	55.8
Tokyo	64.3
Berlin	73.0
Miami	77.4
Melbourne	84.3
Madrid	105.5
Mumbai	108.1
Dubai	136.5
Cape Town	219.5
São Paulo	256.3

Source: Knight Frank Research, Douglas Elliman, Ken Corporation
Note: Currency calculation as at 31st December 2021

Top of the homes

Price growth, of course, is only half the story. Our PIRI “Pagoda” provides an annual guide to how much space your money will buy you around the world when it comes to prime residential property. This year we’ve added a new take to our analysis of relative affordability: Flora Harley has crunched the numbers to discover how much you need to spend to reside in the top 1% of luxury accommodation in a selection of the world’s prime markets.

RELATIVE VALUES

Monaco remains the world’s most expensive enclave: US\$1 million buys just 15 sq m. Strong price growth in Singapore (35 sq m) means the city-state is narrowing the gap with New York, while in Europe, Berlin (73 sq m) and Madrid (106 sq m) continue to offer a lower market entry point than Paris (42 sq m). For those seeking real value, the emerging market destinations are the go-to options. Your US\$1 million buys almost three times as much space in Dubai (137 sq m) than in Singapore, while in Cape Town (220 sq m) you get ten times as much space for the money compared with Hong Kong.

HEAD ONLINE TO
EXPLORE OUR
INTERACTIVE PIRI
DATA TOOL



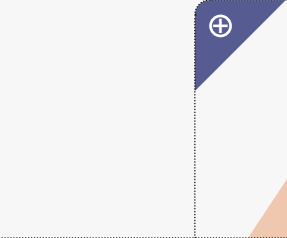
US\$0m US\$10m US\$20m US\$30m

THE 1%

Monaco makes it a clean sweep and tops our 1% rankings as well. To enter the rarefied 1% zone in the principality, homebuyers need to spend US\$34 million. Beijing, which registered prime price growth of nearly 9% in 2021 (see page 51) comes in second at US\$7.6 million, followed by Singapore at US\$7.3 million. Los Angeles and Sydney complete the top five, both with a US\$6.3 million entry point. Mumbai and São Paulo sit at the bottom of our list, at US\$410,000 and US\$440,000 respectively; both figures, rather poetically, at around 1% of the threshold seen in Monaco. The values not only reflect market pricing, but activity across the whole marketplace. With higher volumes of sales we can expect to see lower thresholds, even when markets such as New York (US\$5 million) have enjoyed a record number of sales in Manhattan’s prime neighbourhoods.

The 1% zone

The entry point for the top 1% of homes by value across 15 markets



US\$0m US\$10m

Beijing	7.6m
Singapore	7.3m
Sydney & Los Angeles	6.3m
Hong Kong & Vancouver	5.4m
Paris	5.2m
New York	5.0m
London	4.4m
Berlin	3.1m
Miami	3.0m
Cape Town	0.94m
São Paulo	0.44m
Mumbai	0.41m

US\$0m US\$10m



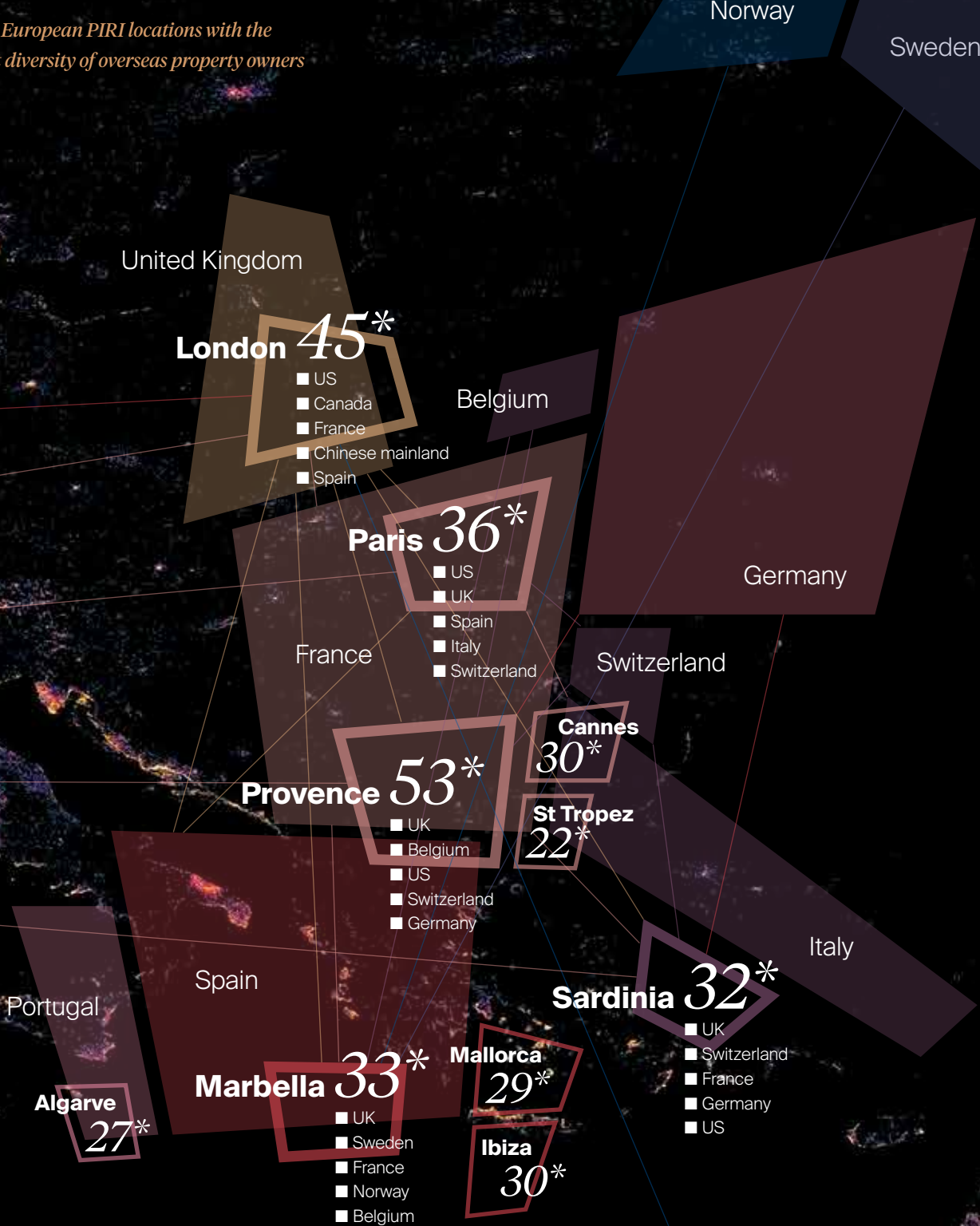
Bright lights

While the number of UHNWIs living in a country or city may indicate the potential depth of that location’s prime property pool, we know that the wealthy own multiple homes globally. With the help of Thusal Bennett from Knight Frank’s Analytics team, we have utilised geospatial techniques to identify Europe’s prime property hotspots and discover who owns homes in each

Wealthy individuals, on average, own three homes, according to the results of our Attitudes Survey. But who is buying where? By analysing more than 30 million data points from online holiday rental platforms we have been able to identify not only some of the densest locations for prime property, but uncover which nationalities are the biggest buyers in those areas. Here we highlight ten destinations across Europe that feature in the PIRI 100 (our benchmark Prime International Residential Index – see page 50 for more details) and reveal the top overseas purchasers in five of these.

Prime hotspots

The ten European PIRI locations with the greatest diversity of overseas property owners



Source: Selected online holiday rental platforms. Findings are based on all properties with an average daily rental rate above US\$250

* Total number of overseas homeowner nationalities (with the top five nationalities shown for the highest ranking)



Prime *predictions*

Undeterred by one of the biggest black swan events in history, our global research teams set out their prime residential market predictions for 2022, while Kate Everett-Allen casts an eye back at how we did last year



This year we will see the luxury housing boom endure. Across the 28 prime residential markets forecast for 2022, we expect prices to increase by 5.7%. In normal times, this outlook would be considered robust; against the backdrop of 2021 it looks at best subdued. But then 2021 was something of an anomaly.

A period of recalibration is likely in 2022 as housing markets regain some of their usual seasonality and borders reopen, with Covid-19 suppressors – rather than eliminators – winning out. This will enable cross-border transactions to slowly recover; a key component of demand that has been largely absent from prime markets since the start of the pandemic.

Dubai, Miami and Zurich lead the way, with prime prices expected to end 2022 between 10% and 12% higher. Healthy rises but, compared with 2021, growth will moderate for these and other top performers, including Seoul (+9%), Sydney (+9%), Los Angeles (+8%) and Auckland (+7%).

London (+7%) and Moscow (+7%) enter the top of our rankings table for the first time in several years while New York's forecast of +5% will signal a marked turnaround following four years of negative annual price growth.

Europe's top cities may sit mid-table, but growth of 4%–10% is buoyant by historic standards. Debt will remain cheap, with the European Central Bank likely to be among the last to tighten monetary policy.

Asian cities are expected to trail slightly in 2022, but with cities such as Singapore (+2%) already announcing higher rates of stamp duty, some investors may take heart that any significant move in terms of cooling measures may now be in the rear-view mirror.

How did we do in 2021?

In the interest of full disclosure and transparency we look back at what we got right – and wrong – in 2021.

Twelve months ago, we said that 2021 would be a year of “steady and sustainable growth” for the world's top residential markets. In fact, it was more like stellar and spectacular.

We expected a flurry of activity as the vaccination rollout gathered pace, travel started to normalise and Zoom meetings became less prolific, but nothing on the scale that transpired. Of the 28 markets we provided forecasts for last year, we expected the top performer to reach the heady heights of 7% growth; the actual figure was more than six times higher at 44%.

ON THE MONEY

Without blowing our own trumpet, we largely nailed which cities were going to enjoy the strongest growth – Seoul, Shanghai and Miami all outperformed the rest of the pack in 2021, albeit we needed to add another 10%–20% to their annual increases.

Thirteen cities saw us come within 5% of the actual 2021 result. Europe was our forte: we were on the money with Madrid and Barcelona, and less than 2% out on Berlin, Vienna, London and Dublin.

ROOM FOR IMPROVEMENT

We proved too conservative on 15 markets, most notably those in the US, Australia and, as mentioned earlier, Seoul, which outpaced its Asian counterparts by some margin.

Our biggest faux pas was Dubai, which totally wrong-footed us. Its lifestyle, relative value and resilience during the pandemic cast the city in a new light in the eyes of international buyers.



Prime *prospects*

Prime residential price forecasts vs performance



The big *five* in 2022

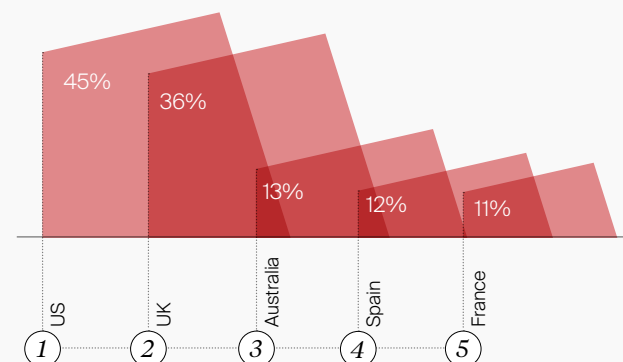
KEY TRENDS TO MONITOR

1. Stock shortages in prime markets will persist.
2. Taxes and cooling measures will be ramped up.
3. The super-prime market (US\$10 million+) will detach further.
4. Momentum will pivot away from suburbia.
5. China's economic and property slowdown will have global repercussions.

Sources: Knight Frank Research, Douglas Elliman



Most popular *locations* for new UHNWI home purchases (% of respondents)





Home hotspots

The Wealth Report's international property guru Kate Everett-Allen curates a handpicked selection of the neighbourhoods where Knight Frank's global teams of residential experts expect prices to outperform over the coming years

Tapping into the local knowledge and expertise of our global teams to discover which neighbourhoods are set to be the world's newest residential hotspots and deciding which ones to feature in *The Wealth Report* is a fascinating way to end each year. Covid-19 may have upended housing markets, but opportunities abound, even in a pandemic-ravaged world.

This edition includes more than 40 neighbourhoods our teams are confident will see stronger-than-average capital growth over the next five years. Twelve feature over the following pages, but you can explore another 30-plus online.

I have split the entries this year into the various categories that we consider will be among the biggest property drivers in a world continuing to adapt to Covid-19. These range from locations promoting health and wellbeing to cities on the cusp of large-scale regeneration projects, and from markets offering significant income growth potential to those that now offer relative value.

The line-up also includes neighbourhoods that have been living for too long in the shadow of their neighbours as well as some that may have previously been overlooked due to their stock of smaller apartments.

Now sit back, and enjoy our whistle-stop tour of this year's top picks.

FOR THE FULL SUITE OF HOTSPOTS HEAD ONLINE



Byron Bay, Australia



INCOME GROWTH POTENTIAL

QIANHAI, SHENZHEN, CHINA

3%–5%

Located on the east coast of the Pearl River and west of the Nantou Peninsula, the Qianhai Shenzhen–Hong Kong Co-operation Zone will provide a new urban centre for the Greater Bay Area. It will also act as a showcase for in-depth co-operation between Guangdong, Hong Kong and Macau, and establish the area as a global presence.

Why is it primed for growth?

Based on the new plan released by the local government, Qianhai is set to expand from its current 15 sq km to more than 120 sq km. Burgeoning urban development and favourable policies mean that the area – which has a strong focus on reform and innovation – is already attracting businesses from the mainland, Hong Kong and Macau. In future, the expectation is that Qianhai will attract even more high-quality talent, capital and projects.

Where do the locals like to go?

Spectacularly scenic Qianhai Seaside Park is one of the area's most beautiful spots. Enjoy the water and sandy beach, or just relax on the extensive lawns and admire the view across to Shenzhen's spectacular 128m-high Ferris wheel, the Bay Glory.

What will my money buy me?

A two-bedroom apartment facing the ocean is currently available at 6.3 million yuan while 8.9 million yuan will secure a three-bedroom apartment, just a few minutes' walk from the metro line 5 station.

Laurence Zhu, Knight Frank China

DUBLIN 8, IRELAND

15%–20%

With a heritage that dates back to the founding of the city, Dublin 8's recent history is characterised by industries including weaving, tanning, distilling and brewing – most notably,

it is the home of Guinness. Today, the area is a creative hub, home to dynamic tech and new media companies along with arts, medical and educational centres.

Why is it primed for growth?

Students and young professionals are being drawn to Dublin 8 by the range of accommodation offered by international developers optimistic about the neighbourhood's future employment prospects. The new National Children's Hospital is currently under construction and it is estimated that 8,000 workers will be employed across the campus. Meanwhile, Ballymore and Diageo are creating a masterplan for the Guinness Quarter. Initial proposals included 63,000 sq m of office space, 5,000 sq m of retail space and 22,000 sq m of hotel and leisure space; in reality, it is likely to be far more. These projects, along with many others, will transform the local economy.

Where do the locals like to go?

Hen's Teeth is a café, gallery and studio that also hosts workshops, talks, pop-up dinners, intimate gigs and exhibitions throughout the year. If you're in the area on a Saturday morning join the queue at the Scéal Bakery at Fumbally Stables – their breads and viennoiserie are legendary.

What will my money buy me?

In prime Dublin 8 locations an older one-bedroom apartment currently starts at around €350,000, with larger Victorian family homes fetching anywhere from €750,000 to €1.5 million. For new-build apartments in the most sought-after spots, expect prices to start at around €400,000, rising to €1 million-plus for a penthouse.

Ray Palmer-Smith, Knight Frank Ireland

HEAD ONLINE FOR LOCATIONS WITH INCOME GROWTH POTENTIAL INCLUDING:

- 1st arrondissement, Paris
- Stokes Croft, Bristol
- Montegancedo, Madrid

KEY
 5-year price forecast

HEALTH AND WELLBEING

BYRON BAY, NSW, AUSTRALIA

30%–35%

Byron Bay, located in northern New South Wales close to the Queensland state border, is known for its quiet coves and pristine beaches. It's where you can watch whales and dolphins play in the warm waters or pack a picnic and head for the hinterland with its historic towns and villages, rolling green hills, lush rainforest and dramatic waterfalls.

Why is it primed for growth?

Byron Bay's environmentally minded council has limited the number of new homes built over the past few decades, meaning that the pace of development has been more measured than in other tourist towns. This is slowly shifting as the area's housing shortage begins to impact on local residents, amplified by the recent influx of city-dwellers switching to hybrid work styles.

Where do the locals like to go?

As the warm days stretch out in Byron Bay, many locals take advantage of some of the best surfing breaks along the east coast of Australia including The Pass, Wategos and Belongil beaches.

What will my money buy me?

New energy-efficient homes at Harvest, a masterplanned and sustainable coastal community, start at A\$2.5 million. Some offer up to six bedrooms and a swimming pool on a generous 900 sq m lot; ideal for entertaining and bringing family and friends together all year round.

Michelle Ciesielski, Knight Frank Australia ►



COMO, LOMBARDY, ITALY



5%–10%

Long considered a neighbourhood of Milan, Como is a splendid, elegant and family-friendly city in its own right. It offers a high quality of life in close proximity to nature, as well as prestigious schools and restaurants, excellent quality services and access to the main international airports and Switzerland.

Why is it primed for growth?

With its restored period buildings, historic villas with lakeside gardens and large, panoramic apartments, Como offers privacy and a sense of wellbeing that attracts professionals and families keen to live surrounded by both nature and history.

Where do the locals like to go?

During the week, either before or after a long working day, enjoy a dedicated one-to-one workout session in the exclusive MOV boutique gym to regenerate. At the weekend, take a walk on the Poets' Path, a tranquil wooded footpath that connects Como to neighbouring Brunate, or enjoy excellent food at one of the numerous village festivals on the lake.

What will my money buy me?

A large three-bedroom apartment in a historic building with panoramic views across both the lake and the city is around €2.15 million, while a two-bedroom apartment in the centre with private entrance is around €895,000. A four-bedroom top floor apartment in one of the most prestigious areas with a large terrace and sweeping views over the city and the surrounding hills is available for €990,000.

Victoria Siddons, Knight Frank International

HEAD ONLINE FOR MORE LOCATIONS WITH HEALTH AND WELLBEING POTENTIAL INCLUDING:

- Queenstown, New Zealand
- Lunigiana, Liguria
- Constantia, Cape Town
- Comporta, Portugal
- Natai Beach, Phuket
- Naples, Florida
- Leopoldstadt, Vienna
- Mbuya, Kampala



Lake Como, Italy

EDUCATION

BACK BAY, BOSTON, US



15%–20%

Within walking distance of Downtown and the Financial District, historic Back Bay is blessed with iconic architecture and open spaces including Boston Common and the Charles River Esplanade. Newbury Street and Copley Place are home to luxury retailers including Chanel, Cartier and Gucci while restaurants such as Zuma, Nusr-Et, Eataly and newcomer Contessa have taken the dining scene to a new epicurean level. The city is also a global centre for education, with more than 50 colleges and universities in the wider metropolitan area.

Why is it primed for growth?

As well as its exclusive 24/7 live, work, play lifestyle, Back Bay is close to world-renowned medical institutions and globally-ranked schools such as Harvard, MIT and Boston University.

It is also at the epicentre of the life sciences and biotechnology sectors: upper Back Bay is being pulled west to Kendall Square and south to Kenmore Square and Longwood Medical Center, where the lab space market is booming. A crop of mid-rise condominiums close to the commercial area allow developers to build higher than in the protected historic centre, where restrictions are in place to preserve the district's unique flavour.

Where do the locals like to go?

The spectacular Quin House, located at 217 Commonwealth Avenue, is Boston's answer to Soho House. It's a remarkable new addition to the city generally and to the Back Bay neighbourhood in particular.

What will my money buy me?

Prices run from US\$400,000 for a 300 sq ft condominium to between US\$25 million and US\$30 million for a townhouse mansion.

Kevin Ahearn, Douglas Elliman

VERBIER, SWISS ALPS



10%–20%

In the heart of the Canton Valais, on a south-facing plateau, Verbier has 412km of ski runs, most of which are north-facing and above 2,200m, making it a snow-sure resort. Offering world-class skiing and snowboarding, plus endless trails for hikers and ski touring enthusiasts, it also has a great selection of shops and restaurants and is known for its lively après-ski scene.

Why is it primed for growth?

The trend to escape the city, driven by the Covid-19 pandemic, has led to a huge spike in demand in the Alps. With its easy airport access, lakeside position and excellent schools, Verbier is much in demand by both local and international buyers. Its two international schools allow pupils to attend for a single semester, offering tremendous flexibility for those wishing to live here during the ski season only. There is also an expectation that the primary residence requirement will be lifted – although note that foreign buyers cannot resell within five years.

Where do the locals like to go?

On New Year's Eve head to Cabane Mont Fort or Cabane Brunet for a stunning view of the town's annual firework display, without the crowds.

What will my money buy me?

A large, luxurious four-bedroom chalet within easy reach of the slopes is on the market for approximately Sfr8–10 million, while a top floor three-bedroom apartment in a prime location will fetch around Sfr2.5–4.5 million.

Alex Koch de Gooreynd, Knight Frank International

HEAD ONLINE FOR MORE LOCATIONS WITH EDUCATIONAL OPPORTUNITIES INCLUDING:

- San Domenico/Fiesole, Florence
- Subang Jaya, Kuala Lumpur

TAX

PALM JUMEIRAH, DUBAI, UAE



15%–20%

The Palm Jumeirah is considered to be one of Dubai's most exclusive beachfront neighbourhoods. The city's first – and now the world's most iconic – land reclamation project, it is built in the shape of a date palm tree, and stretches over an area of around 5 sq km in the Arabian Gulf.

Why is it primed for growth?

The Palm Jumeirah has reached critical mass in terms of its community infrastructure. It now boasts two shopping malls, the world's largest dancing fountains and Dubai's highest concentration of luxury resorts. In 2021, it saw almost half of all super-prime residential transactions in Dubai with buyers from Monaco, Switzerland and the Chinese mainland drawn in by its cosmopolitan lifestyle, year-round sunshine and safe-haven status, but more

importantly by how the UAE has contained the spread of Covid-19. Another key attraction is the favourable tax regime – there is no income tax in Dubai on income generated in the Emirates.

Where do the locals like to go?

The trunk of the Palm is home to the island's only park, flanked by apartments in the Golden Mile. The Zabeel Saray Hotel by Jumeirah, on the western tip of the crescent, featured in the film *Mission Impossible – Ghost Protocol* and hosts The Rib Room. One of Dubai's most exquisite steak restaurants, it has an outpost at the Jumeirah Carlton Hotel in London's Knightsbridge.

What will my money buy me?

Dh21 million will buy you a five-bedroom villa at Palm Jumeirah's brand new development Balqis Residence, with direct ocean and Dubai Marina views and access to a private beach, while Dh5.5 million will secure a stunning three-bedroom fully furnished apartment at Five Palm, located on the west trunk of the Palm Jumeirah.

Faisal Durrani, Knight Frank Middle East ▶

The Palm Jumeirah, Dubai





78704, AUSTIN, TEXAS

**20%–30%**

The 78704 zipcode comprises the most eclectic, soulful and desirable locations in central Austin. Directly adjacent to Downtown across the banks of Lady Bird Lake, the area is home to South Congress Avenue, the Butler Hike and Bike Trail, Zilker Park, the iconic Barton Springs Pool and Barton Creek Greenbelt.

Why is it primed for growth?

Austin generally offers a low cost of living and a business-friendly tax and regulatory environment. On top of that, the 78704 zipcode is filled with hip hangouts and award-winning restaurants interspersed with tree-lined streets featuring a mix of classic bungalows and modern masterpieces. The balanced lifestyle the area offers every demographic is hard to beat, with both peaceful natural surroundings and vibrant urban settings available within mere minutes of each other.

Where do the locals like to go?

Locals are a friendly bunch and will willingly share where to find their favourite queso or brisket, so grab a cold beer or bottle of champagne and play a round at Peter Pan mini-golf before heading to happy hour at Uchi – you will have made at least three new friends by then. Or go big and book a suite at the Hotel Saint Cecilia where you can explore Music Lane before dancing the night away at The Continental Club.

What will my money buy me?

A brand new 4,000-plus sq ft four-bedroom home is currently available at US\$3.3 million, while a 1,600 sq ft two-bedroom mid-rise condominium near the water is trading for US\$1.1 million.

Matthew Ditlow,
Douglas Elliman

HEAD ONLINE FOR MORE
LOCATIONS WITH ATTRACTIVE TAX
REGIMES INCLUDING:

- Conches, Switzerland
- Lingang, Shanghai
- Versilia Hills, Tuscany

RELATIVE VALUE

KNIGHTSBRIDGE, LONDON

**25%–30%**

The home of Harrods is located to the south of Hyde Park and contains some of London's most exclusive shops, hotels, museums and Michelin-starred restaurants. Its 275 listed buildings include grand Victorian terraces and mansion blocks. The district is identified in the London Plan as one of two “international centres” in the capital.

Why is it primed for growth?

Despite the presence of luxury developments, Knightsbridge has become slightly less fashionable than Mayfair in recent years. Overlooked during the Covid-19 pandemic due to the high proportion of flats in the area, it is looking like good value again.

Where do the locals like to go?

Pavilion Road, which runs from Sloane Square through Knightsbridge, has been redeveloped by Cadogan Estates and offers a wide choice of artisan food, beauty and fashion retailers. It is also home to KXU, a fashionable gym with treatment rooms and snack bar where the locals like to hang out. The most surprising thing about the area, though, is the quality of its schools.

The Royal Albert Hall, Knightsbridge, London

**What will my money buy me?**

A two-bedroom flat will cost around £2 million, rising to £3.5 million for an in-demand property on a garden square. Family houses will set you back between £5 million and £7 million, rising to between £10 million and £15 million in the most desirable areas. In the high-end developments, one-bedroom flats range from £2.5 million to £7 million, with larger apartments selling for more than £20 million.

Tom Bill, Knight Frank Research

CAP D'ANTIBES, FRANCE

**15%–25%**

Home to ports and harbours including the Port Gallice, the Cap d'Antibes peninsula extends from the French Riviera coastline between the neighbouring towns of Juan les Pins and Antibes. The Cap is renowned for its unspoiled nature with beautiful sandy beaches including La Garoupe,

HEAD ONLINE FOR MORE
LOCATIONS THAT OFFER RELATIVE
VALUE INCLUDING:

- Megève, French Alps

as well as hosting a number of historic and architecturally significant homes.

Why is it primed for growth?

As demand for villas flourishes in the likes of Cannes, international buyers are looking to Cap d'Antibes which offers a rare and enviable combination of greenery and proximity to the Mediterranean, ideal for family living. Further east along the Riviera and in the direction of Monaco, the likes of Saint-Jean-Cap-Ferrat offer real estate at a significantly higher price, pointing to potential future growth here.

Where do the locals like to go?

Choose from among the beachside restaurants at La Garoupe, then head along the 5km coastal path loop towards the Villa Eilenroc. Further on you will find the Hotel du Cap-Eden-Roc which sits in majestic parkland and offers an array of restaurants and bars, including the Michelin-starred Louroc, perfect for whiling away a Mediterranean evening.

What will my money buy me?

Prices for two-bedroom apartments with rental potential start from approximately €1.1 million. A four-bedroom villa with private swimming pool will start from around €3 million, with sea views commanding a premium.

Jack Harris, Knight Frank International

INFRASTRUCTURE

ORCHARD ROAD, SINGAPORE

**10%–15%**

Located in the same district as Singapore's famed Orchard Road retail belt, the area is a lifestyle destination not just for locals but for the whole of South-East Asia.

Why is it primed for growth?

Once travel lanes open again post-pandemic, private wealth from around the region is expected to look towards prime homes in the heart of the district, particularly in the light of plans to revitalise Orchard Road with greenery and space for activities. The area will also become even more accessible with the development of two new mass transit stations.



Orchard Road, Singapore

Where do the locals like to go?

While the thoroughfare is best known for its retail offerings, it is also tree-lined and interspersed with green open spaces. At the boundaries of the area lie the Singapore Botanic Gardens, a World Heritage Site.

What will my money buy me?

For investors seeking a foothold, a 635 sq ft one-bedroom apartment at Scotts Square, around the corner from the iconic ION Orchard shopping mall, is available for just over S\$2.1 million.

Leonard Tay, Knight Frank Singapore

AVIGNON, FRANCE

**10%–15%**

Famous for its cultural riches and impressive Palace of the Popes, this gem of a city combines history with a lively, modern vibe. There's a great selection of hotels, restaurants and cafés as well as excellent transport links connecting the city to the UK and the rest of Europe.

Why is it primed for growth?

A new 5km tramway provides easy travelling in and around the city. The architecture is stunning, while the Ile de la Barthelasse offers 700 hectares

of greenery just a few minutes by foot from the city centre.

Where do the locals like to go?

Head to the 200-year-old opera house on Place de L'Horloge or try a cooking class at the famous Le Marmiton restaurant. Music fans can chill out at the blues festival in early autumn.

What will my money buy me?

A stunning 14th-century townhouse is available at €2.15 million, while a beautifully presented triplex apartment has an asking price of €1.19 million. An architect-designed house with pool and garage is currently on the market for €720,000.

Nicola Christinger, Knight Frank International

HEAD ONLINE FOR MORE
LOCATIONS BENEFITING FROM
NEW INFRASTRUCTURE INCLUDING:

- Pak Shek Kok, Hong Kong
- Centro, Madrid
- Treptow-Köpenick, Berlin
- Diani, Kenyan Coast
- Eko Atlantic City, Lagos



Fast forward:

Homes of the future

Jindal Villa, Mumbai, India: HBA Residential led on the design of this 100-year home

The way the places we call home are designed and constructed is set to change radically over the coming decades. So would we recognise the houses of 2122? Anna Ward investigates

Architect Mun Summ Wong recently created a video about what Singapore could look like in 2100. His motivation? To show what the 15-minute city concept could look like in high-density Asian cities in decades to come.

His vision is a bold one. Green walkways are paved with photovoltaic panels that generate solar energy, while on-demand autonomous vehicles transport people both above and below ground, and even underwater.

Buildings encompass a far broader range of uses than today, combining green public spaces with office and retail space, food and energy production and residences on multiple levels.

This is one futuristic take on the increasingly popular idea of the 15-minute city: an urban community where everything you need – groceries, leisure, work – is within a 15-minute walk of your home.

“We need to change the way we think about a street,” says Wong, co-founder of Singapore-based architectural practice WOHA, renowned for its buildings lined and topped with lush foliage. “While in Europe the 15-minute city makes sense on one building level, in a high-density environment we must create multiple ground levels higher up. We want to create streets in the sky.”

WOHA’s recent projects include designing the masterplan for Singapore’s Punggol Digital District, which aims to provide residents with greener, smarter homes within easy reach of



the new employment opportunities offered by the District’s proposed new business park.

Around the world, built environment experts like Wong are taking a view on how we will live in the future. And it is those views that will influence how our homes are built and designed.

HOW WILL OUR HOMES BE BUILT?

Property is warming up to the idea of robotics, says Wong. “In the future, city buildings will be built by robots and drones and there will be less dependency on humans. I think by 2100 we will also get to the point where buildings are being cleaned by robots.”

We are already heading in this direction. The UK’s largest housebuilder, Barratt Developments, has built a zero-carbon concept home in Salford, Greater Manchester using offsite prefabricated brick wall panels at ground level, reducing the need for bricklayers on site and cutting construction time by half. “What was different about it was we had the brickwork on site, but we didn’t have a bricklayer,” says Oliver Novakovic, technical and innovation director at Barratt.

As demand for sustainably built structures rises, so the real estate sector is adapting to find ways to meet these changing preferences.

In Frankfurt, Germany, for example, developer Groß & Partner has managed to reuse 90% of the materials from the buildings demolished to make way for FOUR, a major mixed-use skyscraper project.

“Not only were the old materials reused, but we also managed to accomplish this with minimal transportation,” says managing director Jose Martinez.

New types of building materials are also set to become more widely available commercially, including those with a much lower carbon footprint.

In Japan, wooden construction specialist Sumitomo Forestry is planning to build a 350m wood and steel tower in Tokyo, which will combine new residences with hotels, offices and retail space.

“We plan to achieve the W350 Project in the future, but it is necessary to take into account the economic challenges of building it, as well as strict regulations,” says Atsushi Kawamura, Sumitomo’s managing executive officer.



Punggol Digital District, Singapore: architecture practice WOHA advised on the master plan

WHAT WILL OUR HOMES LOOK LIKE?

“Fuzzy” is how one designer describes how residential tower blocks could look in the future. “Those slick exteriors will change as people move away from a defined silhouette towards something softer, and more like an oasis,” says Charlie Caswell, principal at interior design consultants HBA Residential, which advises a mix of high-end developers and wealthy private clients across the world. “The edges will become fuzzier.”

Recent projects include the Jindal Villa in Mumbai, India. Leading on the architectural and interior design elements, HBA’s brief was to create a multi-generational family home that will last for 100 years. The building has a steel and concrete structure and the majority of the exterior is clad in travertine stone. “[Travertine stone] is a beautiful material as it is porous and so gains a patina with age,” explains Caswell. “It is textural and timeless.”

In New York, China-based developer Dajia US is upgrading and restoring the 90-year-old Waldorf Astoria hotel, as well as adding private homes for sale for the first time located above the hotel.

“We want to make the Waldorf Astoria more functional for the next 90 years,” says Dajia’s CEO Andrew Miller. “For example, we are completely replacing 5,300 windows. The

new windows will be identical in design to the original 1931 windows; however, they will offer 2020s acoustic and thermal performance.”

Inside the home, things will also look very different. As Charu Gandhi, founder and director of London-based interior design and architecture firm Elicyon, explains: “Materials in the home in the future will self-repair and self-sanitise. We may have materials that look integrated but are modular, so you can paint something on it, but the top layer disintegrates and pulls apart. We will also have inbuilt fingerprint technology.”

Different countries around the world face unique challenges dictated by their climates, governments and cultures. But as we have seen across Asia, the US and Europe, climate change and rapid technological advancements are two common themes driving change in residential real estate and, as a result, homes in advanced economies could look almost unrecognisable in decades to come.

HEAD ONLINE
TO READ ANNA'S
FULL ARTICLE



CHAPTER FOUR

Cities

With cities booming back into life, find out which are attracting UHNWIs – and where's next



LONG LIVE THE CITY

70

Find out which urban power tops our City Wealth Index in 2022

THE LION GOES GREEN

72

Focus on Singapore as the wealth hub turns sustainability leader

FLYING HIGH

78

Private jet travel took off in 2021, but which cities saw the greatest activity?

CITIES OF THE FUTURE

80

We explore four new cities – anyone for Mars?



Long live the city

As we predicted last year, cities came roaring back to life in 2021 and still have further to go. Flora Harley analyses the latest results from our City Wealth Index, a staple of *The Wealth Report*, assessing where the wealthy prefer to live, spend time and invest

The resilience of cities in the face of the Covid-19 pandemic has been striking. Talk of a mass exodus in 2020 turned to “boomerang residents” as many new exiles realised the grass was not always greener away from the hustle and bustle of urban life.

Cities have an unwavering draw as economic, cultural and societal hubs. That is why each year we assess 100 of them around the world against a number of criteria, from their wealthy populations and global connectivity to this year’s addition of real estate sustainability metrics.

Overall, following a tie in last year’s index, London edges the top spot ahead of New York and Paris, which take joint second place. Los Angeles and Asia’s highest ranking city, Tokyo, complete the top five. Putting aside New York’s demotion, North American cities claim dominance this year. Seven of them feature in our top 20, followed by six from Europe and Asia’s five. Sydney, Australasia’s highest entry, comes in 14th.

London saw the largest volume of cross-border private capital (US\$3 billion) invested into real estate during 2021, as well as attracting the most diverse investor base. But when you add home-grown private capital into the mix, Los Angeles saw a staggering US\$17.8 billion of private real estate investment last year.

New York retains its crown as the world’s wealth capital, with more UHNWIs choosing to reside there than in any other city. Tokyo and Paris are runners up and all three saw

their wealthy populations increase in 2021, up by 11%, 9% and 8.5% respectively.

Given rising climate concerns and a lack of environmental, social and governance (ESG) metrics (see page 43) cited as a barrier to investment, we have included green and climate scores within our index this year. Using data from our sister publication *Active Capital’s* Sustainably Led Cities research we highlight those cities with an established market for investable green real estate assets and those with characteristics that support ESG real estate benchmarking. The highest scorers here are London, New York and Shanghai.

We also include a climate resilience score, which shows no city is immune to the impact of rising temperatures. Those with the greatest resilience are Istanbul, Dubai and Moscow.

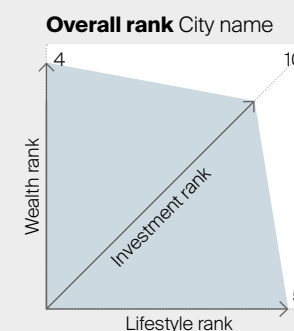
So, where next for cities? In 2022 we will see even more life breathed back into them as we enter the next stage of the pandemic recovery. But for some real future gazing, flip to page 80 for a selection of new hi-tech urban centres that could emerge over the coming decades, including one that is literally out of this world.

HEAD ONLINE
FOR THE FULL
METHODOLOGY
AND TO SEE MORE
CITY WEALTH DATA



City shapes

The Knight Frank City Wealth Index 2022



Wealth

TOP 5

New York
Tokyo
Paris
London
Los Angeles

Investment

TOP 5

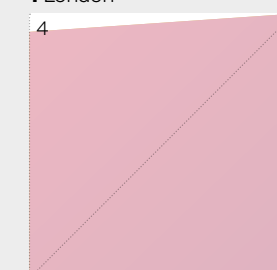
London
Berlin
Washington DC
Paris
New York

Lifestyle

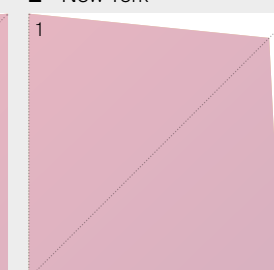
TOP 5

London
Paris
New York
Hong Kong
Los Angeles

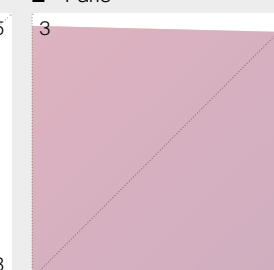
1 London



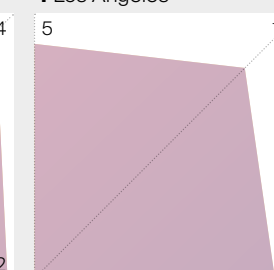
2= New York



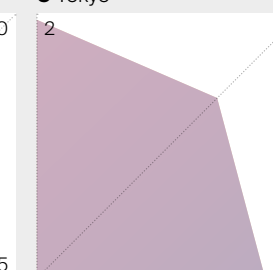
2= Paris



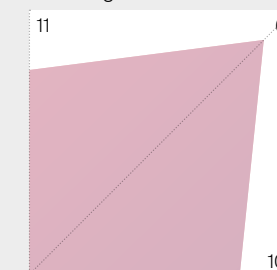
4 Los Angeles



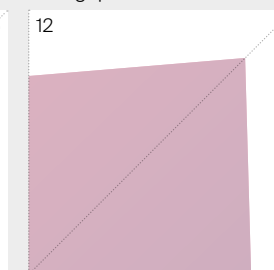
5 Tokyo



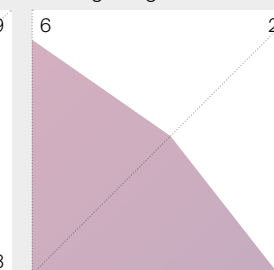
6 Chicago



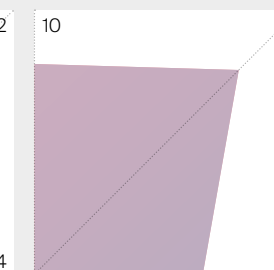
7 Singapore



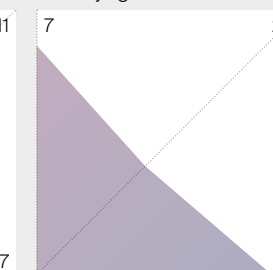
8 Hong Kong



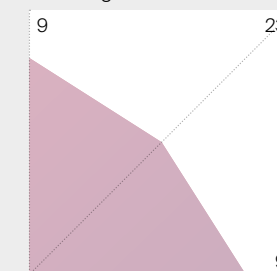
9 Toronto



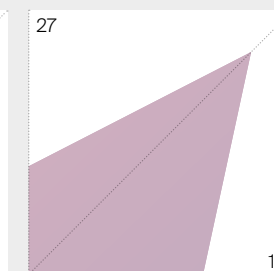
10 Beijing



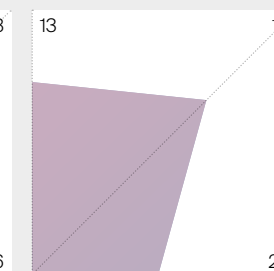
11 Shanghai



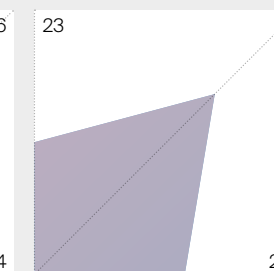
12 Amsterdam



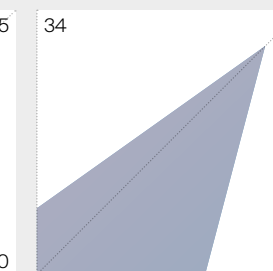
13 San Francisco



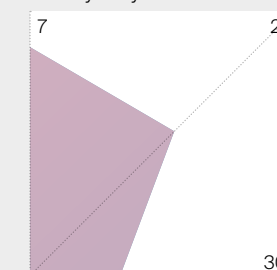
14= Madrid



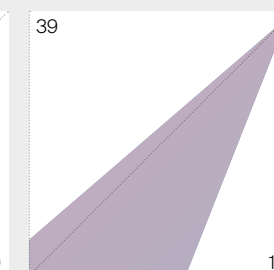
14= Munich



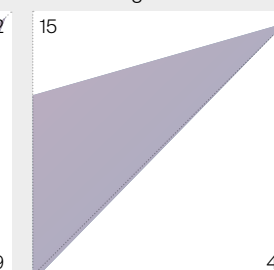
14= Sydney



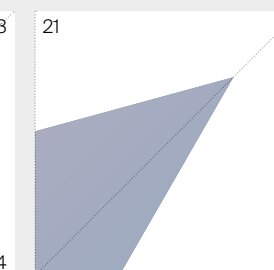
17 Berlin



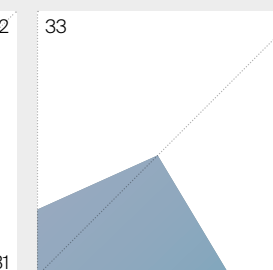
18 Washington DC



19 Boston



20 Moscow



Source: Knight Frank Research



The lion goes *green*

In this special city focus, Patrick Gower discusses the tax incentives, financial innovation, political stability, sustainability initiatives and lifestyle advantages that have positioned Singapore as a pre-eminent destination for entrepreneurial UHNWIs and family offices from Asia and beyond

At the core of Citigroup's new wealth hub at 268 Orchard Road, carefully choreographed shrubs and trees sit under an expansive glass atrium.

"Garden pods" nestle among the trees in what the building's architect Ministry of Design dubs a "banking conservatory".

The space is a prime example of the biophilic design that is becoming increasingly common in Singapore, blurring the lines between the city and nature. It is also on the frontline of a new battle among global banking powerhouses for the largest slice of business generated by a rapidly expanding cohort of UHNWIs.

"Singapore appeals as a wealth hub for its conducive environment for growth for wealth management providers, especially asset management players and family offices," says Money K, Global Head of Global Client Service at Citi Private Bank. "Incentive schemes by the regulators have also been a boost to Singapore's appeal."

Citi plans to hire 1,500 people in the city-state as part of its wealth ramp-up. In August, HSBC acquired French insurer Axa's Singapore assets as part of its plan to scale up its wealth management business. In November, UBS opened what is now its largest office in the region – a 400,000 sq ft prime space at 9 Penang Road.

When you look at the numbers, it's easy to see why. The number of individuals with at least US\$1 million of net assets (HNWIs) soared 126% to 526,370 between 2016 and 2021, and will expand another 13% by 2026, according to the Knight Frank Wealth Sizing Model. The cohort of UHNWIs is expanding at an even faster clip. The number of individuals worth at least US\$30 million swelled 158% to 4,206 over the same period. That group will expand another 43% by 2026.

"Singapore has some of the best corporate governance, it has a triple-A credit rating, it has a robust legal system, but I think most importantly, people feel safe putting their money into the banking system," says Matthew Song, Senior Vice President at Singapore Exchange (SGX). Those features "have been augmented with tax incentives and grants from the economic development board. Singapore is now the number one wealth management hub in Asia".

PANDEMIC RESPONSE

Singapore stepped up its targeting of wealthy individuals in 2019 when it introduced the 13R and 13X tax schemes giving exemptions on a raft of investments. In January 2020, regulators launched a legal structure called the Variable Capital Company, designed to lure fund managers and family offices from rival low-tax jurisdictions. The structure is designed both for



Image credit: Changi Airport Group

From Jewel Changi Airport (above) to Citi Bank's new client hub (below left), Singapore is going green

traditional and alternative investment funds and can be used either as a standalone entity or as an umbrella for multiple funds.

Since the onset of the pandemic, Singapore has been a beacon of stability. The nation's pandemic response drew praise from the International Monetary Fund due to its "robust economic policy framework [that] enabled the authorities to mount a co-ordinated, comprehensive, and sizable policy response, with fiscal policy acting as a first line of defence". Wealth flowed in as a result and the number of family offices doubled to 400 in the 12 months to December 2020, according to the most recent available data from the Wealth Management Institute.

Franklin Medici multi-family office was founded by Augustus Xu in late 2019 and already works with 100 Singaporean family offices. "Singapore has the complete wealth and asset

management system," says Xu. "Family offices can make good use of its financial platforms to establish customised investment strategies that institutionalise individual investors by creating active rather than passive investments."

"The family office has flourished in Singapore because the structure keeps things simple, particularly as families get larger with more mouths to feed, and facilitates discussions on succession planning, inheritance and risk management, while helping the younger generation learn about investing," says Nicholas Keong, Head of Knight Frank's Singapore Private Office. "But to build an ecosystem you must provide the infrastructure, the human capital, the connectivity and the tax efficiencies to make it work, and Singapore has done just that."

The incentives have drawn some of the biggest names in tech and finance. The

billionaire behind Haidilao International Holding, the world's biggest chain of hotpot restaurants, and Ray Dalio, the billionaire founder of Bridgewater Associates, have both set up family offices in Singapore during the past two years. ▶

Singapore appeals as a wealth hub for its conducive environment for growth for wealth management providers, especially asset management players and family offices

Money K



Image credit: Citi



US\$
12.3bn
Foreign acquisitions by
Singapore REITs in 2021

Last year, Sergey Brin, co-founder of Google, said his family office Bayshore Global Management would open a branch in town.

COMMUNITY BUILDING

"The family office sector has been growing rapidly in Singapore, with added momentum in recent years," says Foo Mee Har, CEO of Singapore's Wealth Management Institute (WMI). "We have increasingly seen business families looking to formalise how they manage their family

wealth and support their initiatives in areas such as philanthropy."

WMI set up the Global-Asia Family Office Circle (GFO Circle), an initiative aimed at supporting the growth of the family office sector. Community building in a trusted environment is at the core of the platform, but it also includes education programmes and research forums aimed both at family members and their advisors, Foo adds.

As the family office ecosystem has grown more sophisticated, participants have sought out innovative new products and sustainable investments. SGX has been "engaging with multi- and single-family offices to see what kind of capital markets products we can create for them", says SGX's Song.

A typical family office will allocate about 50% to 60% to fixed income, another 20% to the equity market and another 20% to real assets, he adds. Real estate exposure through real estate investment trusts (REITs) has soared in popularity – according to our Attitudes Survey, indirect exposure to real estate accounts for an average 16% of Singaporean UHNWI's investable wealth – for the dividend yields that typically range from 4% to 8%. Foreign acquisitions by Singaporean

REITs hit an all-time high of 61 last year with a total value of US\$12.3 billion, also more than double compared with the previous year, according to data compiled by Bloomberg.

SPACTACULAR

Special purpose acquisition companies (SPACs) are the hottest new investing trend among Singapore's wealthy. The companies raise money in public offerings, put it in a trust, then aim to merge with a private company, thereby taking it public. SGX last year began offering a regulatory framework similar to the system offered in the US, requiring sponsors while allowing the participation of retail investors.

Vertex Technology Acquisition Corporation became Singapore's second SPAC in January, with sponsors that included Financière Agache, a holding company of Bernard Arnault, Chairman and CEO of LVMH. A third SPAC called Novo Tellus Alpha Acquisition had filed its prospectus at the time of writing.

"Clearly there is demand from the private banking and family office space – particularly given what we've already seen in the US," Song adds. "We definitely see a lot of growth in this area."

SGX will soon launch Climate Impact X, a global carbon exchange enabling trading of carbon credit offsets and renewable energy certificates. The exchange is aimed at mostly multinational corporations and institutional investors, but taps into a broader pool of demand aiming to put money towards causes that promote green or social issues.

WMI's GFO Circle has worked with the Gates Foundation and other local foundations to educate Singapore's family offices as to how they can make the biggest impact. Many family offices are run by the next generation and are increasingly looking to put purpose alongside returns in their list of priorities, for example through impact investing, according to Foo.

"Family offices are a fantastic source of patient, long-term capital that fills a gap in the market. They have the flexibility to take on investments and risks that may be more difficult for regular, institutional capital," she adds. "It's an increasingly important alternative source of capital that is positive for the country as a whole, and can help spur entrepreneurship, sustainability and philanthropy in the region."



Green growth

Singapore's push to grow at least 30% of its own food by 2030 is the latest in a long history of innovations seeking to offset the limits of geography and make the city a more sustainable and desirable place to live, work and invest

Deep inside a nondescript white office building in an industrial district near Singapore's northern border, neat rows of Tuscan and curly kale sit on shelves stacked from floor to ceiling, bathing in a cool purple glow.

The kale belongs to Sustenir, a Singapore-based pioneer of urban, vertical farming. The purple light is a mixture of the blue and red LEDs that encourage photosynthesis, an integral part of the formula that enables Sustenir to produce a tonne of kale every month for every 580 sq ft it occupies – about the size of a standard size room. Across Singapore, Hong Kong and Malaysia, the company occupies 90,000 sq ft.

"We compete with produce that comes from abroad or long distances, that's how we play to win," says founder Benjamin Swan.

Kale is a cool season crop, thriving in temperatures of between 15°C and 20°C, cooler than Singapore's coldest winter days. The snap of a fresh stem of home-grown kale had rarely been heard in Singapore until Sustenir began operating in 2015. The produce is fresher, cheaper, fully traceable, creates jobs locally and has a tiny carbon footprint relative to imported food, according to Swan.

"Our model serves people, the planet and prosperity," he adds. "It's a triple bottom line business."



One of Sustenir's kale production facilities

POCKETS OF FARMING

Singapore imports about 90% of its total food consumption and urban farming techniques like Sustenir's could be pivotal in the city-state's efforts to be more self-sufficient. The government wants to meet 30% of the nation's nutritional needs through locally produced food by 2030 – a big ask for a country of 5.7 million that, at 729 sq km, occupies a smaller space than New York City.

Pockets of farming are popping up in the most unlikely places. Go to the roof of the Raffles City Shopping Centre in the Downtown Core, for example, and you'll find a garden of more than 1,600 organic herbs and plants used for food and skincare ingredients.

The drive to grow more food domestically is a recent move in a much longer Singaporean tradition of innovating to offset the limits of geography. The nation has been reclaiming

land from the sea to support its expansion since the early 19th century and has been battling rising temperatures and the impacts of rapidly increasing population density since long before the rest of the world started to get serious about climate change. That makes it a petri dish for the latest ideas in sustainable innovation, a reputation the government is seeking to burnish by luring entrepreneurs seeking answers to the climate's toughest questions. ▶

30%
The government's target
for locally produced
food by 2030

Scaling new heights Singapore's expanding wealth populations

HNWIs (US\$1m+)
UHNWIs (US\$30m+)

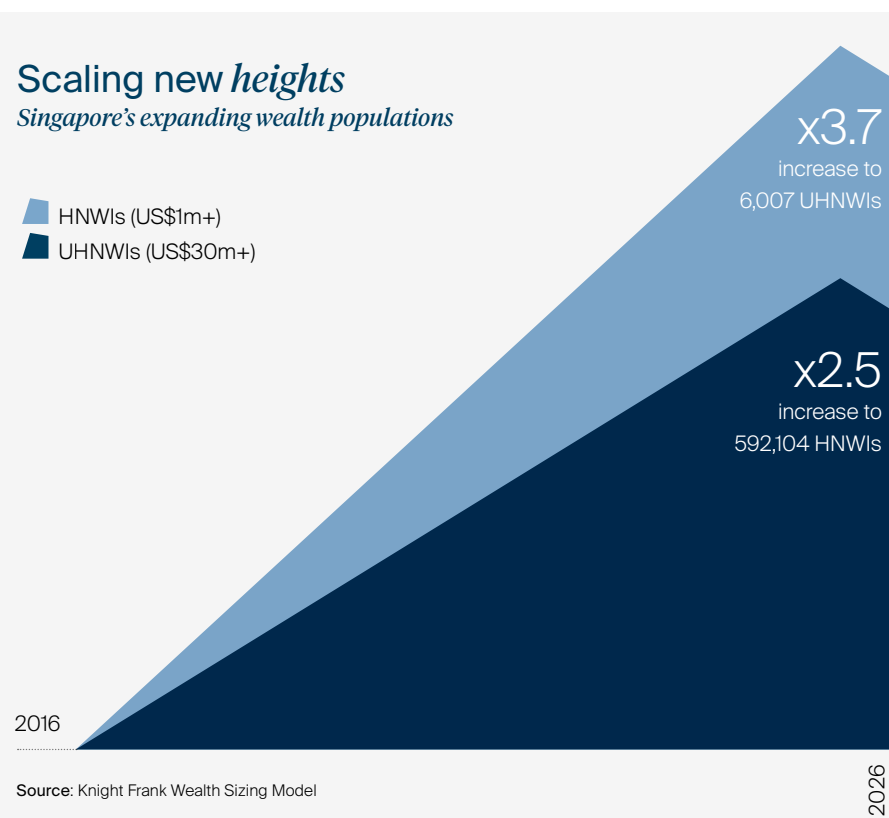




Image credit: Daniel Welsh, Unsplash



Supertree Grove at Gardens by the Bay

"Singapore has really embraced the digital and knowledge economies. It has opened foreign educational institutions and really wants to be viewed as a living laboratory for new ideas and innovation," says Jason Pomeroy, a specialist in sustainable urbanism and founding principal of consultancy Pomeroy Studio. "That means trying to attract technology companies, young entrepreneurs and start-ups, while having the impetus in the government's economic development boards and other agencies to issue incentives that make sense."

GOVERNMENT INVESTMENT

In 2019, the Singapore Food Agency set up a S\$144 million fund to increase domestic capabilities in sustainable urban food production, future foods and food safety science. For entrepreneurs like Swan, government investment has been vital. In 2018, Sustenir was manufacturing its systems in partnerships with companies all over the

world when Swan concluded the model was too inefficient.

"The industry was so fragmented," he says. "Components were being developed in silos so they weren't working together efficiently. We weren't getting the results we needed to survive using off the shelf products, especially here in Singapore, where costs are very high."

Swan took the problem to the Singaporean government, telling them he believed he could create better technology than was currently available. "They backed us," he adds. "R&D is expensive and as a start-up, we couldn't take the risk of attempting the development without backing. Sustenir might not have achieved the success it has today without their support."

The various branches of Singapore's sustainability push come under its Green Plan 2030, published in February 2021. Positioning Singapore as "a city in nature", the plan harks back to a speech made in the 1960s by the then Prime Minister Lee Kuan Yew, who wanted to

Architects are installing high- and low-tech systems in luxury homes. AI is becoming increasingly useful in optimising a home's energy usage

Chris Godfrey

build a "garden city with flowers and trees, without waste and as neat and orderly as possible".

This blending of urbanism with nature is underpinned by legislation. The 1971 Trees and Plants Act, enacted to protect existing and newly planted trees, has been integral in ensuring mature trees blend with modern architecture. The 1991 Concept Plan by the Urban Redevelopment

Authority sought to weave urban development with nature and waterbodies, a principle that underpins some of Singapore's most well-known features, including the Supertree Grove at Gardens by the Bay; an orchard of 50m tall, solar-powered, tree-like frames that play host to exotic ferns, vines and orchids.

A GREEN PLAN

The Green Plan 2030 aims to take all this further by expanding the amount of land set aside for natural parks by 50%, or about 200 hectares. A million additional trees will absorb another 78,000 tonnes of CO₂ by 2030.

"Gravitating from a garden city to a city in nature is a big step," says Alice Tan, Head of Consultancy at Knight Frank Singapore. "We already have a huge green lung and the push to increase green density includes key policies like improved protection of forests and mature trees. That will be vital in providing shade and will be extremely important to future generations."

Singapore is pushing to find high-tech solutions to the climate crisis, but harnessing shade and other natural solutions sit at the core of plans to alleviate emissions indirectly caused by rising temperatures, particularly in the built environment.

Buildings are responsible for more than a third of the nation's total energy consumption, largely due to cooling. The government wants to "green" 80% of its buildings by floor area by 2030 while ensuring 80% of new buildings qualify for new Super Low Energy (SLE) certificates. These are awarded to buildings that achieve 60% energy savings compared with 2005 building codes.

About 50 buildings have SLE certificates so far and the most successful blend new technology with natural cooling. The School of Design and Environment, dubbed "an outstanding example of a new zero energy building in the tropics" by the World Green Building Council, has huge overhanging shades with walls that can be moved, depending on occupants' needs.

Designed as "porous" by Serie Architects and completed in 2019, large slats optimise lateral ventilation and natural light. The hybrid cooling system circulates air using ceiling fans and the roof is fitted with 1,225 solar panels, enabling the building to operate with an energy surplus of about 30%. The surplus is then fed back to the campus grid.

LUXURY HOMES

Architects are installing comparable high- and low-tech systems in luxury homes. Artificial intelligence is becoming increasingly useful in optimising a home's energy usage on behalf of owners, learning their habits as they use the property, according to Chris Godfrey, Global Principal at HBA Residential. Semi-passive techniques, including smart design that enhances shade while optimising light and air flow are also vital, he says.

"We have been working on a project that uses water features to cool, so you have a beautiful, serene feature that acts as a natural cooling device as opposed to air conditioning," he adds. "These techniques extend to ensuring projects are contextual, so their orientation is suitable relative to the sun, for example, or they make beneficial use of the landscape."

Net zero luxury homes and government buildings are all well and good, but techniques will need to be democratised if Singapore is to meaningfully eat into its emissions, according to Pomeroy. Some 86% of the population live in social housing and approximately 80% of households own an air conditioning unit, according to official figures. Those buildings will need to be redesigned eventually in order to make more use of natural light and ventilation. "Only then can you start thinking about active measures such as solar power and rainwater harvesting," he adds.

For Swan, democratising the urban farming techniques pioneered in Singapore will be crucial if the world is to cut food waste down to manageable levels. Some 4.8 million tonnes of food is wasted annually in the UK's supply chain, for example, and fresh produce is regularly close to inedible by the time it reaches consumers. By comparison, Sustenir's kale would last two weeks at a minimum when refrigerated, Swan claims.

"You could completely decentralise the food value chain by having farms like Sustenir in the heart of cities, growing what can't be grown locally or is off season, and start to think about having the farms within communities once again," he adds. "Global warming is already impacting us and the time to make changes was yesterday. If we're still producing food in ten years' time as we are now, then we're in big trouble."

1m

New trees to be planted by 2030



Flying high

Global private jet activity took off again last year, surpassing even pre-Covid levels. Richard Koe of our aviation data partner WINGX tracks the flight paths across the world’s leading regional city hubs

Business aviation activity hit some all-time highs in 2021 with a spectacular rebound in business jet demand in the second half of the year as Covid-19 restrictions were lightened in the US and Europe. Globally, there were 7% more business jet flights operated in 2021 than in 2019, and

a 50% uptick on 2020. This contrasts starkly with scheduled passenger airline activity, which last year remained 35% below 2019 levels. The US was the key market for business jet activity, with its charter and fractional fleets flying at maximum capacity. Leading operators undertook a flurry of fleet acquisitions in order to meet significant demand from their growing customer base.

Many customers were new to the business aviation sector as the convenience and bubble-hygiene of flying privately drew travellers away from the depleted airline networks. Demand was especially evident for leisure travel, with surges during weekends and public holidays as well as around popular sports and lifestyle events. Sunny, seaside and remote getaway destinations attracted most attention.



The main metro hubs saw a more modest recovery, losing much of their pre-pandemic activity due to stringent Covid travel restrictions, reintroduced during the winter wave of early 2021. London and New York, situated in the eye of the pandemic storm, suffered most, with leading business aviation airports like Teterboro and Farnborough only recovering in Q4 2021. For the full year, business jet traffic was down by 26% and 16% respectively compared with pre-pandemic 2019 across the airports in these two hubs. The next busiest European hub, Paris, rallied more strongly, with activity back to within 5% of 2019 levels by the end of the year. Connections with Mediterranean resorts, notably Nice, sped up the recovery at Le Bourget.

Moscow metro hub was unusually busy in 2021, with Vnukovo business terminal ranking in the top five European airports for departures. Business jet departures were way up on pre-pandemic levels, 23% higher than in 2019. Elsewhere, South America saw a pronounced increase in the use of business aviation aircraft, with on-demand services filling gaps in cratered airline networks. São Paulo was the key regional hub, with business jet flights up nearly 50% on 2019. Dubai saw a spectacular rise in business jet activity in 2021, more than doubling activity compared with 2019. Dubai World Central was the key hub. The Nigerian capital, Abuja, also saw very strong growth in 2021. Cities in Asia saw more resilient business jet traffic during 2020 but this recovery relapsed

during 2021 as lockdown policies were reimposed. Sydney ended the year slightly up on 2019, whereas the likes of Beijing, Singapore and Hong Kong were behind. New Delhi business jet traffic, however, was buoyant.

FLY ONLINE TO EXPERIENCE THE NEW WINGX/WEALTH REPORT DATA WIDGET



Departure board 2021

PRIVATE AVIATION											
Regional hub	Global rank for flight numbers	Total flights in 2021	2020	2019	% change		Number of route pairs	Most popular pair			
NEW YORK	1	135648	89744	183139	51%	-26%	187887	NEWYORK - MIAMI			
LONDON	13	36682	29005	43858	26%	-16%	62664	LONDON - PARIS			
PARIS	30	22552	14610	23864	54%	-5%	36305	PARIS - LONDON			
MOSCOW	37	19382	14094	15715	38%	23%	24324	MOSCOW - LONDON			
SÃO PAULO	70	11358	7814	7778	45%	46%	6648	SÃO PAULO - BELO			
DUBAI	110	9048	4650	3589	95%	152%	9903	DUBAI - MOSCOW			
SYDNEY	260	2481	2057	2354	21%	5%	2130	SYDNEY - MELBOURNE			
ABUJA	302	3073	1716	1065	79%	189%	1214	ABUJA - LAGOS			
NEW DELHI	321	2548	1514	1434	68%	78%	2267	NEWDELHI - DUBAI			
GLOBAL		3.3m	2.3m	3.1m	47%	7%	5.3m	SANFRAN - LA			

SCHEDULED AVIATION											
Fastest growing pair*	Total flights in 2021	2020	2019	% change							
				2020 to 2021	2019 to 2021						
NEWYORK - BOSTON	386200	288883	650813	34%	-41%						
LONDON - MALLORCA	193827	219283	583931	-12%	-67%						
PARIS - NICE	194771	158852	376869	23%	-48%						
MOSCOW - DUBAI	239161	183673	333604	30%	-28%						
SÃOPAULO - RIO	168173	132417	232107	27%	-28%						
DUBAI - MALÉ	137009	103840	224340	32%	-39%						
SYDNEY - NEWCASTLE	67419	64994	165545	4%	-59%						
ABUJA - KANO	8569	4126	6546	108%	31%						
NEWDELHI - JAIPUR	134710	103240	194337	30%	-31%						
LA - LAS VEGAS	22.1m	17.8m	34.1m	25%	-35%						

*Excluding "most popular" pair
Source: All data provided by WINGX

To show regional aviation patterns we asked WINGX to crunch the 2021 flight numbers for the leading travel hub in each of the world's main regions (as listed below). The data includes all flights and departures by jet-powered aeroplanes.

Region	Leading hub
Africa	Abuja - Nigeria
Asia	New Delhi - India
Australasia	Sydney - Australia
Europe	Paris - France
Latin America	São Paulo - Brazil
Middle East	Dubai - UAE
North America	New York - US
Russia/CIS	Moscow
UK	London



Fast forward:

Cities of the future

We look at plans for four new cities of varying ambition that could be welcoming their first residents at some point in the near – or slightly more distant – future

The allure of creating a new city is strong. To the visionary, they are blank canvases that offer up the tantalising prospect of economic regeneration, investment opportunities, social engineering, technological advancement, low-carbon master planning, legacy building, and even the fulfilment of political or ideological aspirations. Dr Sarah Moser of the New Cities Lab at McGill University in Canada estimates that 150 new urban hubs (albeit some less likely to ever be delivered than others) in 40 countries are on the drawing board, with Bitcoin City, located at the foot of a volcano in El Salvador and funded by Bitcoin bonds, the latest to join the list. Our four picks shine a light on this brave new urban world...

Oxagon, the floating logistics hub that is part of Saudi Arabia's NEOM project

HEAR FROM DR SARAH MOSER ON WHAT MAKES A SUCCESSFUL CITY OF THE FUTURE



Image credit: Neom

MOOIKLOOF MEGA CITY, SOUTH AFRICA

East of Pretoria, at Tshwane in Gauteng Province, this 86 billion rand (US\$5 billion) public-private development, masterplanned by Balwin Properties, is expected to be a housing game-changer in more ways than one. Unveiled in 2020 by President Cyril Ramaphosa, the city is set to be the world's largest part-ownership residential property development. It has also been designated as one of South Africa's state-led strategic integrated developments aimed at ensuring inclusive housing for all, as well as having strong green credentials. Spanning over 200 hectares, plans include more than 50,000 residential units plus educational and healthcare facilities, retail and commercial real estate. Mooikloof is expected to create around 41,000 jobs and will offer lifestyle services such as outdoor gyms and sports facilities that have previously been inaccessible to those in lower-income groups – a first for South Africa.



RESIDENTIAL
UNITS
50,000+



COST
US\$5BN



LAND AREA
2M SQ M




JOBS
CREATED
40,000+




TARGET
COMPLETION
DATE
2030

TELOSA, SOMEWHERE IN THE US


Designed by Danish architecture studio BIG, Telosa is the futuristic vision of billionaire and former Walmart executive Marc Lore who wants to create a new community-owned city based on a reformed version of capitalism that he calls equitism. He describes the concept as “a new model for society, where wealth is created in a fair way. It's not burdening the wealthy; it's not increasing taxes. It is simply giving back to the citizens and the people the wealth that they helped create”. As yet, the location of Telosa is undecided, but potential sites include cheap desert areas in Nevada, Utah, Idaho, Arizona, Texas or the Appalachian Mountains. Eventually, it is hoped that the city, which will focus on community and sustainability with no fossil-fuelled vehicles allowed and a circularity-based ethos, will be home to 5 million people.




COST
US\$435+ BN



SIZE
(BY 2040)
600+ SQ KM



POPULATION
(BY 2040)
5M



FIRST
RESIDENTS
2030

NEOM, SAUDI ARABIA

Billed as the world's most innovative, technologically sophisticated and sustainable city, this US\$500 billion masterplanned green-field mega-city in Saudi Arabia's north-west forms part of a broader commitment by the government to diversify the kingdom's economy away from oil. Vision 2030, unveiled as part of a National Transformation Plan in 2016, has so far unleashed almost US\$1 trillion of real estate and infrastructure projects. NEOM aims to set a new benchmark for the development and planning of cities. Spread across almost 30,000 sq km of virgin land, plans include more than 200,000 residential units, 1–2 million sq m of office space, a giant floating fully automated port and logistics hub on the Red Sea called Oxagon, and up to 80,000 hotel rooms. NEOM is expected to be completed by 2030, in time for the Kingdom's 100th birthday.



COST
US\$500+ BN



SIZE
26,500
SQ KM



RESIDENTIAL
UNITS
200K+



OFFICE
SPACE
1-2M SQ M



RETAIL
SPACE
1-2M SQ M




HOTEL
ROOMS
40-80K




COMPLETION
DATE
2030

DUBAI 3.0, MARS

While the official name of the UAE's planned city on Mars is yet to be confirmed, it seems appropriate that the first human settlement on another planet is named after a city that has risen from near obscurity 50 years ago to a cosmopolitan global gateway city today. Plans for the Martian settlement are expected to be realised by 2117, shortly before the UAE's sesquicentennial anniversary. The UAE's ambition for our nearest habitable planetary neighbour has its roots in a broader transformation. As the economy evolves into one that relies more on human capital than fossil fuels, aerospace has emerged as a key focal point for the government. Indeed, in February 2021, the UAE became the first Arab nation and only the third country behind China and the US to successfully deploy a probe (Hope) around Mars. To prepare would-be Martian colonists, a US\$140 million Mars-like habitat is being built in Dubai's Academic City area.



POPULATION
600K



COMPLETION
DATE
2117



CHAPTER FIVE

* Passions

Enter the universe of the world's most passionate collectors

NEW NFT DROPS!
- download now -

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The hottest luxury investment sectors in 2021

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One woman's quest to protect a unique coral archipelago

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Fast forward: superyachts of the future



Passion play

We reveal the results of the unique Knight Frank Luxury Investment Index, while the experts who share their data with us offer their thoughts on a selection of the asset classes covered. Plus an in-depth look at the latest burgeoning art world sector: NFTs



ART
Veronika Lukasova,
AMR

How did your market perform in 2021?

Sotheby's posted record sales of US\$7.3 billion in 2021, while Christie's recorded a five-year high of US\$7.1 billion. According to our All Art Index, average sales were up 13% since 2020, with much of the new ground made up by a handful of big-ticket works. Many of the top lots could be found in the US\$676 million sale of Harry and Linda Macklowe's fabulous art collection at Sotheby's, sparked by the couple's divorce. Several blue-chip artist records were set, including Jackson Pollock's *Number 17*, which achieved US\$61.2 million, and Cy Twombly's *Untitled*, which went for US\$58.9 million.

Who was buying?

The sale of non-fungible tokens (NFTs) linked to digital artworks encouraged a fresh wave of buyers through the portals of the major auction houses last year. According to Christie's, 75% of those investing in the category were new collectors, with an average age of 42. The highest profile were from Asia, with Singapore-based founder of NFT investment fund Metapurse Vignesh Sundaresan, known as MetaKovan, paying US\$69 million for *Everydays: The First 5000 Days*, an NFT by the artist Beeple in March (below). In November, underbidder Justin Sun paid US\$78million for Alberto Giacometti's *Le Nez* from the Macklowe sale, describing the acquisition as part of his drive to promote the fusion of finance, culture and art within the crypto community.

What sales really stood out?

The art world delighted in the sale of Frida Kahlo's *Diego and I*. Completed in 1949, the self-portrait also depicts Kahlo's adulterous husband – Mexican national hero, Diego Rivera. Last appearing at auction 30 years ago, the painting sold for US\$34.9 million, making it the most valuable work of Latin American art ever auctioned. The figure also catapults the value of Kahlo's work above Rivera's for the first time.

What trends will we see in 2022?

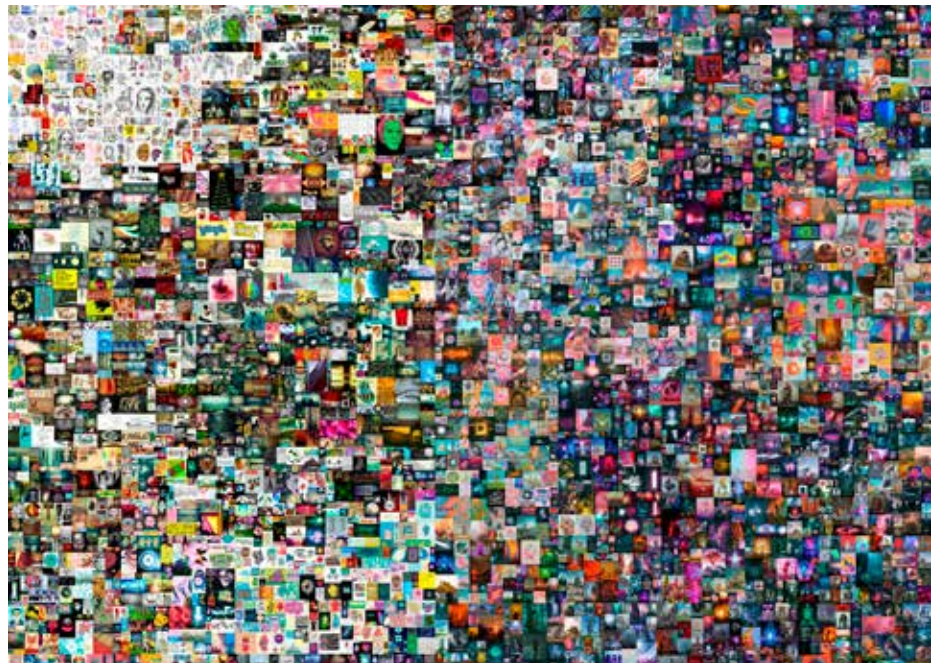
Last year, we predicted the rise in value of the red-chip market – ultra-contemporary artists using social media to build their reputations – and we expect this to carry on. Phillips will continue its successful partnership with Beijing Poly, Asia's biggest auctioneer, while Sotheby's expansion of its online platforms seeks to increase Asian participation worldwide. Over the next two years, Christie's plans to open new salerooms in Hong Kong and Shanghai to accommodate demand. With Asian collectors also chasing NFTs, 2022 will see the continued rise of collectibles competing with sales of art.



SCOTCH WHISKY
Andy Simpson,
Rare Whisky 101

How did your market perform in 2021?

We've continued to see higher value bottles – those over £5,000 – underperform the broader market, although there are now signs of recovery in this sector of the market. The broader market has exceeded both 2019 and 2020 from both a volume/value perspective and also investment growth, so while 2021 has had many ups and downs, bottles of Scotch whisky have remained resilient.



Everydays: The First 5000 Days by crypto artist Beeple



Who was buying?

We're seeing a good blend of demographics buying whisky as an investment. However, anecdotally, the average age of the typical whisky collector looks to be getting lower.

What sales really stood out?

From a value and rarity perspective, the stand-out auction of the year was the Distillers' One of One auction held by the Worshipful Company of Distillers in early December for charity. Of the unique lots on offer the most expensive was Glenfiddich's The 1950s Collection – four bottles of rare spirit, all distilled in the 1950s – which sold for just over £1 million.

What trends will we see in 2022?

Throughout 2021 we saw a number of brand owners start to experiment with NFTs as a way of reaching a broader base of customers. We expect this to become more of a trend in 2022 and beyond. Following some recent declines in investment values for The Macallan, we're

expecting this to be reversed through 2022 for older, discontinued bottles rather than the more voluminous "limited" releases of late.



CLASSIC CARS
Dietrich Hatlapa,
HAGI

How did your market perform in 2021?

Our main index, the HAGI Top, rose by 3% in 2021, well below the long-term annual average. That said, some sectors performed better: the HAGI LPS Index for classic Lamborghinis managed almost 15% for the year followed by Porsche with 8% (HAGI P) and Ferrari on 6% (HAGI F).

Who was buying?

Knowledgeable enthusiasts who felt more comfortable in their asset allocation towards collectors' cars post-Covid. Having made money on the stock market or in tech, wealthy players from across the globe (but mostly the US and Europe) are now also somewhat concerned

about rising inflation going forward. Hence the focus on collectibles.

What sales really stood out?

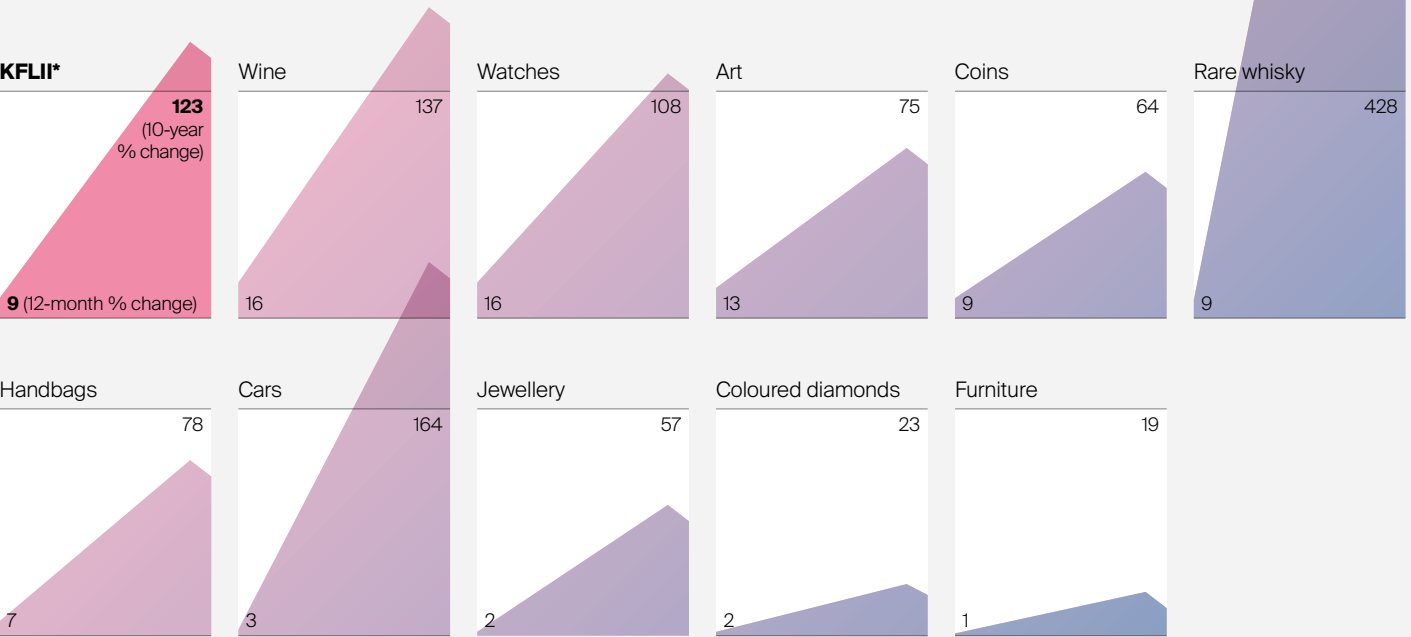
The 1995 McLaren F1 three-seater sports car, chassis 029, made almost US\$20.5 million in Gooding & Company's Monterey auction. The car had covered just 390km from new. The Monterey auctions in August were outstanding overall.

What trends will we see in 2022?

I personally think early supercars or motorsport homologation road versions such as the Mercedes-Benz 190 Evo II, Lamborghini Countach, Bugatti EB 110, Porsche 959, Ferrari 288 GTO and BMW E30 M3 will do well. We are noticing a younger generation of emerging collectors gaining importance in the market. But examples need to be in perfect condition with the lowest mileage. ▶

Objects of desire

The Knight Frank Luxury Investment Index Q4 2021*



*KFLII is a weighted average of individual asset performance. Contact andrew.shirley@knightfrank.com for more information

Sources: Compiled by Knight Frank Research using data from Art Market Research (art, coins, furniture, handbags, jewellery and watches), Fancy Color Research Foundation (coloured diamonds), HAGI (cars), Rare Whisky 101 and Wine Owners



COLOURED DIAMONDS

Miri Chen, Fancy Color Research Foundation

How did your market perform in 2021?

The market saw an overall increase in 2021 in all categories of natural fancy colour diamonds. Due to a significant shortage of pink diamonds between one and three carats prices have risen, especially in the Intense category. We have also seen prices of yellow diamonds in various categories increase, mainly in the five- to ten-carat range. Among smaller diamonds, one-carat Fancy Vivid Yellows stood out.

Who was buying?

The typical buyer prior to Covid-19 was the Chinese client who purchased fancy colour diamonds globally. This has changed due to travel restrictions from China and an increase in available money in the West. We are now seeing buyers from the US and EU driving the strongest demand for fancy colour diamonds.

What sales really stood out?

Typically, the fancy colour diamonds sold at auction are those that can't be sold in the markets since their quality is not good enough. Therefore, the prices of these diamonds do not reflect real market prices. However, at recent auctions, we have seen an increase in the price of yellow diamonds. For example, at the most recent Sotheby's Magnificent Jewels Auction held on 7th December in New York, a 12.24-carat Fancy Intense Yellow Radiant VS1 diamond, which had a high auction estimate of US\$20,424 per carat, sold for US\$32,941 per carat.

What trends will we see in 2022?

A new trend likely to continue is the use of blockchain to track diamonds as they are bought and sold. For example, when a diamond trader puts a diamond on the blockchain, it signs the transaction with its private key. The signature can be verified by anyone using the matching public key. This means that the trader cannot later deny that it was the source of the diamond.



WINE

Miles Davis, Wine Owners

How did your market perform in 2021?

The broader market performed well, rising around 1% per month on average. Champagne (+31%) and Burgundy (+25%) performed particularly well. Champagne from the amazing 2008 vintage stood out thanks to huge consumer and investment demand and some supply chain concerns. Bordeaux (+10%) lagged slightly.

Who was buying?

Asia particularly for trophy Burgundy names and the UK and US for Champagne. There has been a new wave of investment money coming into the wine market, some of it led by macro factors, such

Crypto *crazy*

Baffled by NFT art? AMR's Sebastian Duthy answers your queries

Why should I be interested in NFTs?

With their overtly simplistic or comic book visuals, NFTs appear to be designed by the young to alienate the old. The fact that Beeple, unknown to the world just a year ago, is now the third highest value living artist working today only adds to the confusion. However, there are just a handful of artists who can command these kinds of stellar figures and the painstaking way they have built their reputations follows the example of many traditional artists working today. In fact, with so much controversy surrounding cryptocurrencies, it's especially important for NFT artists to cultivate an authentic working practice if they are to be taken seriously.

Why are auction houses interested in NFTs?

The top auction houses were among the first businesses to explore e-commerce. Sotheby's first tie up with eBay was way back in 2002, while Christie's launched its own platform, Christie's LIVE, in 2006. Soon followed by others, the top auction houses have been adapting to new shopping habits for some time. As the global pandemic prevented in-house sales, the battle for the attention of millennial (and younger) collectors quickly shifted online. With the number of artworks and collectibles sold via timed auctions now regularly breaking the million-dollar mark, NFTs are just the latest content to keep their customers hooked.

Are NFTs for everybody?

Collecting has changed radically over the past ten years as rising prices have attracted more than just art lovers to this exciting and unpredictable marketplace. Since NFT markets are virtual, they are almost untraceable, and this makes them popular with buyers wishing to stay under the radar. The opposite is also true, however, as a younger generation, already comfortable sharing much of their lives online, are embracing the reach and notoriety collecting NFTs can offer. Taking their cue from other NFT marketplaces, Sotheby's new Metaverse encourages collectors to create public profiles, listing their purchases and detailing their collecting habits.

Is it art?

The first movers in this new category understood the need to help artists mint their artworks with NFTs. Marketplaces were set up to simplify the process of not only minting artworks but also listing them for sale. Modelled on the way eBay helps

US\$235m
Sales at auction*US\$25bn
Total sales**

NFT sales in 2021

Beeple \$US49.2m

customers find their target audience, NFT creators are given options to enhance their offering, and this includes single or multiple NFTs. Many will have seen the sale of the first-ever published tweet by CEO Jack Dorsey in March for US\$2.9 million, while in June last year creator of the world wide web Sir Tim Berners-Lee sold the original source code with an NFT for US\$5.4 million. On the other hand, many have chosen to create editions, such as Larva Labs' 10,000 CryptoPunks, which are now changing hands for millions of dollars. These editions are known as collectibles and appear to be the most popular format of the two so far.

Are NFTs investments?

In November last year, a Twitterbot reported the biggest ever sale of a CryptoPunk NFT, which had just transacted at US\$532 million. On closer inspection, it was revealed that the mysterious buyer actually purchased the NFT from themselves. While the purpose was not exactly clear, this is precisely the kind of unruly behaviour sceptics believe will be the end of this new collecting category. Other crypto enthusiasts appear to be taking the business much more seriously. Investor and collector Pablo Rodriguez-Fraile, who reportedly made a hundredfold profit (US\$6.6 million) from the sale of a work by Beeple, and cryptocurrency billionaire Justin Sun are trying to bridge the gap between the metaverse and the art world. Through shows combining physical art and digital works from their collections, both believe this kind of dialogue might, in future, confer on NFTs the kind of cultural capital only blue-chip artists enjoy.

Yuga Labs US\$4.6m

Dmitri Cherniak US\$2.7m

Mad Dog Jones US\$2.2m Larva Labs US\$2.1m

Kevin McCoy US\$1.5m Mitchell F. Chan US\$1.5m

Rare Pepe US\$1.3m

Don Diablo US\$0.93m

Refik Anadol US\$0.63m

*The average value of digital art sold at auction in 2021



as inflation worries – with wine being seen as a hedge – but also more localised factors such as supply shortages due to weather conditions, particularly frost, and supply chain issues.

What sales really stood out?

There have been all sorts of new records set, particularly for rare Burgundy. On the flip side, there have also been issues at the auction houses with fake trophy wines, particularly in the US.

What trends will we see in 2022?

Inflation and supply chain concerns will continue to fuel demand. People are drinking more expensive wine at home due to Covid restrictions. Australia's Penfolds is the first (and so far only, I think) producer to make an NFT announcement; no doubt more will come.



WATCHES

Sebastian Duthy, AMR

How did your market perform in 2021?

For big auction houses like Christie's, Sotheby's and Phillips, luxury categories such as watches were once seen as a gateway to their main business of selling art. Last year proved that this was no longer the case as total sales of watches topped £420 million at auction worldwide. The figure – an increase of 54% on the previous year – also proves that public sales are back with a vengeance since the lifting of many pandemic restrictions.

Who was buying?

Sales of watches in Hong Kong continue to outpace rivals Geneva and New York, but only just. The Asian market was buoyed by an earlier lifting of restrictions, but also by a younger generation of Asian collectors seeking trophy pieces.

What sales really stood out?

Phillips, the premier auction house for watches, nearly doubled the previous total for their autumnal Geneva sale. With an auction total of Sfr24 million, the November sale was packed with 400 enthusiasts and a further 2,300 online. Among the 12 lots to break the Sfr1 million mark was a 64-year-old Omega Speedmaster, nicknamed the Tropical Broad Arrow. One of the original timepieces designed to compete in the emerging market for "tool" watches, this rare example eclipsed all previous records at just over Sfr3 million.

What trends will we see in 2022?

Independent watchmakers stole the headlines in 2021, with new records set for watches by George Daniels, Roger Smith, Christian Klings and Philippe Dufour. AMR's index of Rolex sports watches showed the steepest climb, however, as appetite for the finest examples remains insatiable. According to our new Rolex watch report, Rolex Daytonas continue to increase in value the most overall, closely followed by Explorers and Submariners.

Sources: *AMR (based on sales by Bonhams, Christie's, Phillips and Sotheby's)
**dapradar.com



Best sellers

Alongside the rise of the NFT, 2021 saw some stellar – and even interstellar – luxury investments from an ever wider range of categories go under the hammer with the world's leading auction houses. *The Wealth Report* presents a selection of the year's most expensive and intriguing sales

Sotheby's sold a copy of the first printing of the **final text of the United States Constitution** for US\$43.2 million, a world auction record for any book, manuscript, historical document or printed text.



Pablo Picasso's *Femme assise près d'une fenêtre (Marie-Thérèse)* was the most expensive painting to sell in 2021 when it fetched US\$103.4 million at Christie's 20th Century Evening Sale in May.



A **1995 McLaren F1** in a "time capsule" state with just 390km on the clock sold for US\$20.5 million with Gooding & Company at the benchmark Monterey sales, the highest price fetched by a car at auction in 2021.



Photo: Mike Maetz

Christie's set a new record for a fancy vivid purple pink diamond when it sold the internally flawless **15.81-carat Sakura diamond** for HK\$226 million (US\$29.3 million) at its Hong Kong Magnificent Jewels sale in May.



The unique 1933 Double Eagle, the last gold coin issued by the United States Mint that can be legally owned by a private individual, was sold by Sotheby's in June for a record US\$18.9 million.



The Colt single action revolver used by Pat Garrett to kill Billy the Kid sold at Bonhams' The Early West sale in Los Angeles for US\$6 million, a new auction world record for any firearm.



A two-train minute repeating grande and petite sonnerie wristwatch made by Philippe Dufour set a record for an independent watchmaker when it fetched SFr4.7 million (US\$5.2 million) with Phillips in November.

Phillips sold a **1993 Ron Arad polished stainless steel "D-Sofa", number 1 of 3 prototypes**, at its London Design Auction in June for a world record £1.2 million against a high estimate of just £120,000.



A pair of Michael Jordan's Nike Air Ships – his earliest game-worn sneakers, attributed to his fifth NBA game – set a new world auction record when they were sold by Sotheby's for US\$1.5 million.



Literally out of this world, Christie's achieved a meteorite auction record with the £525,000 sale of a slice of the **4.5 billion-year-old Fukang meteorite discovered in Xinjiang province, China**, in 2000.



A necklace featuring an **octagonal step-cut 56.87-carat emerald and 120 diamonds totalling 65.75 carats** set a new world auction record for a Zambian emerald when Phillips sold it for HK\$8.1 million (US\$1 million).



Owned by the iconic Jane Birkin herself, this much-loved **Hermès Black Togo Birkin 35** achieved well over its guide price when it made £119,000 at Bonhams' July Designer Handbags and Fashion sale.

Images courtesy of Bonhams, Christie's, Gooding & Company, Phillips and Sotheby's



Saving Nemo

The world's most delicate ecosystems are under threat. Andrew Shirley meets a woman determined to protect a unique marine habitat in a remote corner of Indonesia

Chatting about animated children's feature films isn't generally the way I kick off interviews for *The Wealth Report*, but just a few minutes after meeting Bali-based Natália Perry over Zoom we are already talking about Nemo, the plucky little clownfish who is swept around the world's oceans on a series of crazy adventures.

As it turns out, the idea behind Nemo's story is actually not that far-fetched. As Perry explains, underwater nutrient-laden super highways do indeed snake around the planet, their surging currents propelling marine life of all shapes and sizes vast distances from one side of the world to the other. When they eventually run out of steam, those passengers still hitching a ride are discharged into astonishingly species-rich oceanic oases.

As part of a journey that sounds almost as challenging as Nemo's, Perry just happens to be

the steward of one of these oases – the 315,000-hectare Widi Reserve, part of the Maluku Islands, in eastern Indonesia, that she helped to create.

"It is an extraordinarily unique spot on the planet," she explains. "We've got blue whales, sperm whales, humpbacks, minke whales, pilots. In fact, we've counted about 16 different species of whale so far, 14 species of dolphin and we're on about 15, and counting, species of shark. We have a higher biodiversity and higher biomass of shark than anywhere else in Indonesia."

But what makes Widi even more special, and differentiates it from other tropical paradises such as the Maldives, is what's happening above the water. The archipelago's 100 or so coral islands are the remnants of the rim of two extinct volcanoes shooting half a kilometre up from the ocean floor. Between them they are home to 1,650 hectares of virgin rainforest whose canopy soars as high as 70 metres. ▶



The Widi Reserve's many islands contain a rare mix of pristine coral reef, beaches, mangrove and rainforest

"It feels like a mix of *Avatar* and *Jurassic Park* when you get there," says Perry. "Some of our trees are two-and-a-half metres wide and about 300 years old, which is undocumented on any other coral atoll anywhere on the planet. We have recorded 600 species so far, many of them marine – but all the naturalists who have visited agree that these forests, without a doubt, have many new species waiting to be discovered; mostly insects, but also many new subspecies of birds."

Perry's unusual guardianship of the Widi Reserve stems from another of the transformative initiatives that she continues to pursue. Prior to creating the Widi Reserve, Natalia worked on combating crimes against children; harrowing

and challenging work that equipped her with a special kind of determination and grit that she now brings to all her projects.

While working in Indonesia she discovered the archipelago in 2014 – becoming only the second non-local in living memory to visit, according to mainland fishermen. Realising its ecological significance – and, frankly, in need of some time away from the ugly and often dangerous world she'd immersed herself in for two decades – she set out to protect it from the ever-increasing threats of illegal fishing, deforestation and mass tourism.

Creating a sustainable conservation plan that satisfied the local government's desire to create employment and boost the local

economy – simply "fencing off" the islands as some environmentalists urged wasn't an option – hasn't been easy, stresses Perry, a purpose-driven businesswoman who says she tires of the assumption that addressing human or ecological matters is hobby philanthropy.

"It took 35,000 dedicated hours of my time, a total of 150,000 working hours from my team, more than 150 government meetings and 180-odd technical experts, conservationists and government officials to achieve the suite of 32 licences and permits we now have in place."

In 2018, after much lobbying, the Indonesian government issued a first-of-its-kind licence giving Perry's company, Leadership Islands Indonesia, the exclusive rights to steward the

islands of the Widi Reserve. This includes permits for the development of up to 1% of the archipelago which, given that it covers 10,000 hectares reef to reef, is still enough to develop 350 keys and 75,000 hectares of the surrounding ocean.

UNTOUCHED

Most of the islands will remain untouched, but 17 have so far been identified as having the potential for decentralised, virtually self-sufficient tourism lodges. "This will have far less impact than one large development. Our plans will tread very lightly on the ecosystem and showcase cutting-edge sustainable design and engineering systems," says Perry. Design guru Bill Bensley, who has created some of Asia's most stylish hotels, is keen to be involved with the project.

To further minimise their impact, the lodges will be developed on areas of non-native coconut plantations established by earlier traders. "Coconut groves are disastrous to coral atolls," Perry explains. "They dry them out, they soak up freshwater, destroy the microclimate and destabilise the land."

But the plan goes beyond tourism. Oliver Nicoll, who specialises in sustainable development and impact investment at Balnagowan Capital, is helping Perry identify other innovative opportunities. "Ultra-luxe, off-grid hospitality has limitations, and crises such as Covid-19 serve to underline the need for complementary revenue streams above and beyond tourism," he says.

Perry believes there is the possibility for the reserve to become a Special Economic Zone (SEZ). When I sound surprised she quickly clarifies: "Normally, SEZs are industry heavy, very polluting, very costly to the environment and to the local people for that matter. But what's interesting is that there's now a rise in green SEZs.

I'd like to propose the world's first blue Special Economic Zone

"What I would like us to do is to propose the world's first blue SEZ: that is to say, a zone designed around the ocean's blue circular economy," she says. "We can do biopharma culture, we can do agriculture, and we can do sustainable fisheries: but what's really exciting is that there are other possibilities, things like underwater data centres powered by ocean thermal energy conversion technologies, which harvest the solar energy stored at the sea's surface by circulating water from the cold deep waters below."

Perry has the support of various partners already, but continues to welcome new partnerships aligned with her mission to protect and preserve this marine paradise at the end of one of the ocean's great superhighways for many generations to come.

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Fast forward:

Sailing into the metawaves

The pandemic-induced “race for space” has extended to the high seas with new superyacht orders up by 6% in 2021 on what was already a bumper year in 2020. But what do the coming decades hold for a sector whose sustainability credentials are often questioned? Max Stott of Superyacht Intelligence shares his views



A render of Alice, the new superyacht concept from shipbuilder Lürssen

The superyacht industry is currently in the middle of a feeding frenzy. Over the past couple of years, shipbuilders around the globe have had their order books filled and the refit and repair sector is almost overheating from the influx of work. While the market is currently in a very good place, that momentum will only be maintained if the industry continues to mature and appeal to the next generation of potential clients.

At a glance, it would be easy to say that the fleet of private 30m+ vessels is simply getting bigger and even more ostentatious. But it's not all about having a big white yacht

in the Mediterranean any more. The giants of the superyacht industry, such as Lürssen, Feadship and Oceanco, have upped the ante in a big way in the past two years. They are building and designing superyachts that are not only marvels of naval architecture, but that also boast incredible utility and engineering. The most audacious superyacht designs on the drawing boards of today will be made for cruising around the Galapagos Islands and sightseeing in the Arctic Circle in ten years' time.

Remote locations aren't the only places seeing more superyachts along their shores. Migration numbers increased by almost 50% in the Pacific North-West between 2015

and 2018. Similarly, it seems absolutely clear that the Middle East and North Africa region (that is, the Red Sea and the Gulf) will be the world's next major superyacht hub by 2050. The area has seen a rise in superyacht migration of 47% since the winter of 2015/16. Moreover, roughly 60% of the 30m+ new-build vessels delivered since 2008 are owned by those with UAE nationality.

However, on a more cynical note, the industry is only recently waking up to the benefits of hybrid propulsion and future fuels. You could probably state with some confidence that superyachts will be sailing in the metaverse before they are all running on nuclear energy and hydrogen in the real world.

Despite the cynicism, there has been a lot of innovation in the naval engineering sector recently which can offer some clarity and inspiration for any future-thinkers. German shipbuilder Lürssen released arguably the most impressive superyacht concept last year in the form of “Alice”. If one wishes to have a glimpse at what the industry is looking to achieve in the next eight years, this 98m methanol-powered motoryacht is a good place to start any ambitious yet conceptual forecasting.

Without sounding too much like the harbinger of doom, from a human perspective, if the past couple of years are anything to go by then the future looks relatively bleak. But as we've seen, unfortunate events in the

outside world don't necessarily correlate to bad business in the superyacht industry. The allure of being able to escape reality and venture into new regions from a perspective that very few get to experience is, and will always be, a superyacht's strongest unique selling point.

That said, the superyacht of 2050 will certainly need to be completely carbon neutral. Ideally, it will require absolutely no crew and will likely never need to undergo refit or repair work. It will be able to fly over mountains and submerge itself deep into the depths of the ocean. The current pace of evolution in the superyacht industry means the requests of potential owners in 30 years'

time will most likely only be possible in the virtual world. And that is why the seemingly inevitable transition of life into the metaverse will almost definitely work to the superyacht industry's advantage come 2050.

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HIGH ARTICLE





CHAPTER SIX

Databank

The numbers behind *The Wealth Report*

The Wealth Report Attitudes Survey

See below for a selection of this year’s findings. For the full Attitudes Survey results, head online.

WEALTH TRENDS

On average, how did your clients' total wealth change in 2021? (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Increased	74%	77%	97%	94%	80%	64%	90%	75%	90%	82%
Remained the same	9%	10%	2%	5%	20%	14%	5%	6%	6%	9%
Decreased	17%	13%	1%	1%	0%	21%	5%	19%	4%	9%

On average, how do you expect your clients' total wealth to change in 2022? (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Increase	85%	85%	91%	85%	80%	86%	95%	60%	80%	83%
Remain the same	11%	13%	8%	14%	10%	14%	5%	33%	18%	14%
Decrease	4%	1%	1%	1%	10%	0%	0%	7%	2%	3%

How do your clients think the following issues will influence their ability to create and preserve wealth? Top five opportunities (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Technological/digital adoption	89%	85%	93%	77%	90%	71%	90%	81%	76%	84%
Private equity/venture capital	87%	73%	74%	84%	90%	86%	80%	69%	72%	79%
Real estate	64%	64%	67%	54%	90%	86%	90%	63%	70%	72%
Equity markets	79%	72%	65%	57%	70%	71%	70%	81%	61%	70%
Blockchain technology	61%	64%	41%	53%	90%	64%	70%	63%	40%	61%

How do your clients think the following issues will influence their ability to create and preserve wealth? Top five threats (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Inflation	82%	53%	72%	80%	80%	43%	85%	56%	81%	70%
Tax and regulation	79%	68%	62%	81%	60%	71%	75%	56%	78%	70%
New Covid-19 variants	80%	67%	71%	66%	60%	57%	65%	75%	52%	66%
Domestic government policy	74%	53%	71%	61%	60%	50%	75%	75%	69%	65%
Interest rates	58%	51%	64%	58%	60%	64%	75%	50%	61%	60%

What % of your clients are planning to apply for a second passport or new citizenship?

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
	30%	17%	4%	8%	30%	13%	12%	11%	11%	15%

What proportion of your clients now invest in the following cryptoassets?

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Cryptocurrencies/tokens/coins	15%	18%	19%	15%	15%	25%	20%	22%	11%	18%
Non-fungible tokens (NFTs)	9%	13%	13%	8%	11%	11%	12%	9%	9%	11%

On average, what proportion of your clients'...

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Total wealth is allocated to the principal and second homes where they and their families spend time?	37%	32%	39%	27%	23%	16%	27%	32%	31%	29%
Investable wealth is allocated...										
Directly to commercial property (including rental property, offices, etc)?	39%	27%	29%	24%	18%	32%	28%	29%	20%	27%
Indirectly to commercial property (includes REITs, funds, etc)?	24%	23%	17%	17%	19%	15%	22%	21%	17%	19%



RESIDENTIAL PROPERTY

On average, how many homes do your clients own?

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
	3.3	3.3	2.4	2.6	3.4	3.2	2.4	2.7	2.6	2.9

What proportion of your clients...

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Own second homes that they rent out?	32%	41%	32%	31%	31%	46%	21%	27%	27%	32%
Bought a home in 2021?	18%	24%	23%	16%	18%	19%	20%	15%	19%	19%
Are planning to buy a home in 2022?	22%	23%	21%	17%	21%	28%	20%	16%	18%	21%

If purchasing a new home, where is it most likely to be located? (1 = most likely, weighted by number of times chosen)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
1	UK	Singapore	Australia	France	US	UK	US	Russia	UK	US
2	Kenya	UK	US	UK	Spain	UAE	UK	Other	France	UK
3	US	US	New Zealand	Switzerland	UK	US	Canada	Italy	Spain	AUSTRALIA
4	South Africa	Canada	UK	Czech Republic	Chile	France	Other	Spain	Portugal	FRANCE
5	Australia	Australia	France	Spain	Other	Singapore	Switzerland	UK	Switzerland	SPAIN

Which of the following are increasingly important considerations for your clients when purchasing a home? (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Broadband speed	45%	30%	49%	44%	40%	57%	35%	38%	58%	44%
Energy source (solar, fossil fuel, air source heat pumps, etc)	59%	38%	22%	48%	10%	36%	25%	38%	42%	35%
Flood risk	28%	23%	29%	23%	0%	21%	25%	31%	24%	23%
Rising sea levels	12%	24%	34%	16%	0%	7%	25%	25%	16%	18%
Wildfire risk	8%	12%	23%	11%	0%	14%	25%	31%	9%	15%
Availability of electric vehicle charging points	8%	32%	13%	24%	10%	14%	10%	0%	21%	15%

What proportion of your clients are considering refinancing options in the next 12 months to capitalise on low interest rates?

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
	27%	27%	31%	21%	35%	39%	22%	19%	29%	28%

PASSION INVESTMENTS

Respondents who said their clients'...

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Philanthropic activities increased in 2021	38%	41%	43%	32%	38%	29%	50%	25%	36%	37%
Spending on investments of passion increased in 2021	11%	30%	39%	15%	38%	29%	21%	17%	25%	25%

Why do they collect investments of passion? (1 = most important reason)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Joy of ownership	1	2	1	1	1	1	1	1	1	1
Safe haven for assets	3	3	2	2	2	2	2=	2	2	2
Investment return	2	1	3	3	3	3	2=	3	3	3

What are the most popular investments of passion* collected by your clients (1 = most popular)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Art	2	1	1	1	1	2	1	2	1	1
Classic cars	1	4	2	2	3	1	2	3	2	2
Jewellery	3	3	4	5	4	4	3	1	5	3
Wine	5	5	3	3=	2	5	4	5	3	4
Watches	4	2	5	3=	5	3	5	4	4	5
Rare whisky	6	6	6	6	7	8	6	8	6	6
Coloured diamonds	7	7	7	7	8	6	7	6=	7	7
Coins	8	9	9	8	9=	7	8=	6=	8	8
Furniture	9	10	8	9	6	10	8=	9	9	9
Handbags	10	8	10	10	9=	9	10	10	10	10

*Assets included in the Knight Frank Luxury Investment Index (page 85)

INVESTMENT PROPERTY

What % of your clients' property portfolios are held overseas?

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
	26%	29%	23%	29%	46%	46%	28%	32%	28%	32%

What % of your clients are planning to invest...

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Directly in commercial property in 2022?	23%	23%	30%	21%	16%	36%	23%	14%	23%	23%
Indirectly (eg through REITs or debt funding) in commercial property in 2022?	17%	25%	25%	14%	20%	22%	25%	13%	21%	20%

Which real estate sectors do your clients currently invest in? Top five (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Offices	37%	49%	52%	52%	40%	86%	45%	38%	45%	49%
Hotels and leisure	34%	30%	32%	33%	50%	71%	35%	25%	34%	38%
Retail	38%	24%	42%	32%	30%	86%	30%	31%	30%	38%
Logistics	25%	25%	48%	48%	30%	29%	50%	19%	37%	35%
Industrial	25%	22%	66%	24%	0%	29%	50%	38%	24%	31%

Are your clients becoming more or less interested in the following sectors? Top five (% net balance: respondents saying more minus those saying less)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Logistics	28%	20%	55%	43%	40%	71%	45%	38%	37%	42%
Healthcare	49%	36%	51%	28%	40%	43%	40%	19%	28%	37%
Industrial	20%	12%	54%	13%	30%	36%	25%	31%	27%	27%
Agricultural	39%	0%	36%	11%	30%	29%	5%	19%	18%	21%
Development land	28%	2%	29%	5%	40%	14%	35%	13%	19%	21%

What, if anything, is driving your clients to focus on ESG-related property investments? (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Futureproofing their portfolio	34%	40%	39%	49%	50%	36%	30%	31%	40%	39%
Opportunity for greater returns	39%	41%	38%	38%	50%	21%	20%	13%	24%	32%
Desire for impact	39%	24%	36%	42%	10%	21%	35%	6%	43%	29%
They aren't interested in ESG-related property	16%	10%	18%	18%	10%	43%	20%	25%	19%	20%
External pressure/reputation	24%	16%	23%	25%	10%	7%	5%	6%	25%	16%

What barriers to ESG-related investments do your clients find most challenging? (% respondents)

	AFRICA	ASIA	AUSTRALASIA	EUROPE (EX UK)	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	RUSSIA & CIS	UK	REGIONAL AVERAGE
Finding the right opportunity	57%	45%	48%	44%	50%	57%	45%	25%	37%	45%
Access to reliable and comparable information	37%	48%	51%	48%	40%	43%	40%	25%	43%	42%
Lack of understanding of ESG	37%	35%	33%	29%	30%	43%	30%	31%	40%	34%
Concerns over being "greenwashed"	22%	18%	32%	47%	0%	21%	25%	19%	28%	24%
Access to green financing	24%	10%	8%	14%	10%	14%	0%	0%	12%	10%



HEAD ONLINE FOR

- The full Attitudes Survey results
- Methodology
- Billionaire populations
- City-level data

The Attitudes Survey is based on responses from more than 600 private bankers, wealth advisors and family offices representing combined wealth of more than US\$3.5 trillion. The survey was taken during October/ November 2021. For selected country-level data please email siobhan.leahy@knightfrank.com

If you'd like to participate in next year's survey do please get in touch. All respondents receive the full country-level dataset.

The Knight Frank Wealth Sizing Model

Region/country/territory	HNWI populations (US\$1m+)				% change			UHNWI populations (US\$30m+)				% change		
	2016	2020	2021	2026	2020-21	2016-21	2021-26	2016	2020	2021	2026	2020-21	2016-21	2021-26
World	43,137,511	64,703,169	69,750,472	106,263,114	7.8%	61.7%	52.3%	348,355	558,828	610,569	783,671	9.3%	75.3%	28.4%
Africa	113,412	124,811	135,068	165,485	8.2%	19.1%	22.5%	2,146	2,257	2,240	2,489	-0.8%	4.4%	11.1%
Asia	10,547,192	16,074,153	17,545,940	28,233,662	9.2%	66.4%	60.9%	85,172	158,455	169,889	225,391	7.2%	99.5%	32.7%
Australasia	1,525,594	2,839,034	3,033,213	4,643,820	6.8%	98.8%	53.1%	10,696	22,077	24,245	32,271	9.8%	126.7%	33.1%
Europe	11,785,873	18,066,763	19,935,567	29,088,397	10.3%	69.1%	45.9%	93,502	143,437	154,008	192,426	7.4%	64.7%	24.9%
Latin America	804,568	679,504	743,205	1,078,287	9.4%	-7.6%	45.1%	9,769	9,611	10,337	13,004	7.6%	5.8%	25.8%
Middle East	574,973	980,897	1,068,538	1,594,805	8.9%	85.8%	49.3%	4,452	8,927	9,717	12,028	8.8%	118.2%	23.8%
North America	17,568,294	25,623,401	26,955,051	41,070,555	5.2%	53.4%	52.4%	138,739	208,177	233,590	299,220	12.2%	68.4%	28.1%
Russia & CIS	217,604	314,607	333,890	388,101	6.1%	53.4%	16.2%	3,878	5,885	6,542	6,843	11.2%	68.7%	4.6%
Argentina	107,643	52,773	56,481	90,161	7%	-48%	60%	1,329	778	829	1,143	7%	-38%	38%
Australia	1,327,701	2,438,709	2,612,249	3,933,489	7%	97%	51%	9,306	18,958	20,874	27,330	10%	124%	31%
Brazil	331,363	294,010	324,236	420,521	10%	-2%	30%	4,092	4,334	4,759	5,333	10%	16%	12%
Canada	1,538,914	2,619,301	2,681,511	4,192,285	2%	74%	56%	12,153	21,281	23,238	30,543	9%	91%	31%
Chinese mainland	4,499,709	8,200,731	9,256,622	17,138,050	13%	106%	85%	37,527	88,358	93,854	133,471	6%	150%	42%
Czech Republic	35,273	69,905	78,450	139,302	12%	122%	78%	276	546	597	906	9%	116%	52%
Denmark	201,461	349,319	384,092	538,740	10%	91%	40%	1,578	2,730	2,921	3,505	7%	85%	20%
Egypt	12,808	14,437	15,740	18,278	9%	23%	16%	235	240	253	264	5%	8%	4%
Finland	99,324	145,894	153,665	201,052	5%	55%	31%	778	1,140	1,168	1,308	2%	50%	12%
France	2,066,703	3,577,080	4,040,555	5,501,048	13%	96%	36%	16,191	27,958	30,724	35,790	10%	90%	16%
Germany	2,126,500	3,513,730	3,728,349	5,309,808	6%	75%	42%	16,660	27,463	28,350	34,545	3%	70%	22%
Greece	48,647	57,988	63,637	94,780	10%	31%	49%	381	453	484	617	7%	27%	27%
Hong Kong SAR	459,407	701,780	757,086	940,866	8%	65%	24%	3,220	5,455	6,050	7,593	11%	88%	26%
Hungary	16,754	27,469	30,948	47,741	13%	85%	54%	131	215	235	311	10%	79%	32%
India	486,519	765,929	796,961	1,407,287	4%	64%	77%	7,401	12,287	13,637	19,006	11%	84%	39%
Indonesia	54,719	86,651	82,012	134,015	-5%	50%	63%	832	1,390	1,403	1,810	1%	69%	29%
Ireland	146,505	284,733	326,050	545,474	15%	123%	67%	1,148	2,225	2,479	3,549	11%	116%	43%
Israel	97,085	183,620	197,542	283,041	8%	103%	43%	680	1,427	1,579	1,967	11%	132%	25%
Italy	1,709,171	2,179,960	2,282,937	3,032,538	5%	34%	33%	13,390	17,038	17,359	19,730	2%	30%	14%
Japan	3,577,670	3,740,562	3,944,073	4,651,963	5%	10%	18%	25,075	29,078	31,516	32,322	8%	26%	3%
Kenya	2,605	3,323	3,362	4,274	1%	29%	27%	78	90	88	100	-2%	13%	14%
Malaysia	43,091	66,350	70,238	130,750	6%	63%	86%	359	715	712	1,018	0%	98%	43%
Mexico	164,110	157,935	161,354	250,932	2%	-2%	56%	2,027	2,328	2,368	3,182	2%	17%	34%
Monaco	19,269	25,405	27,303	39,168	7%	42%	43%	151	199	208	255	5%	38%	23%
New Zealand	178,194	371,172	390,258	664,722	5%	119%	70%	1,249	2,885	3,118	4,618	8%	150%	48%
Nigeria	21,312	27,928	28,996	34,895	4%	36%	20%	391	465	467	505	0%	19%	8%
Norway	132,040	139,024	164,569	290,719	18%	25%	77%	1,034	1,087	1,251	1,891	15%	21%	51%
Philippines	10,826	19,154	18,273	32,685	-5%	69%	79%	165	307	313	441	2%	90%	41%
Poland	77,991	125,589	140,275	272,116	12%	80%	94%	611	982	1,067	1,770	9%	75%	66%
Portugal	74,259	101,794	106,486	160,061	5%	43%	50%	582	796	810	1,041	2%	39%	29%
Qatar	62,378	104,597	104,491	168,219	0%	68%	61%	437	813	835	1,169	3%	91%	40%
Romania	49,643	92,918	91,426	136,514	-2%	84%	49%	904	1,772	1,828	2,501	3%	102%	37%
Russia	203,735	293,155	311,904	353,490	6%	53%	13%	3,712	5,591	6,238	6,477	12%	68%	4%
Saudi Arabia	76,525	135,865	133,003	163,843	-2%	74%	23%	536	1,056	1,063	1,138	1%	98%	7%
Singapore	232,846	498,396	526,370	592,104	6%	126%	12%	1,632	3,874	4,206	6,007	9%	158%	43%
South Africa	26,649	28,043	31,852	34,064	14%	20%	7%	541	603	561	559	-7%	4%	0%
South Korea	481,030	812,064	830,284	1,353,197	2%	73%	63%	3,371	6,313	6,635	9,402	5%	97%	42%
Spain	896,165	1,337,307	1,536,785	2,864,336	15%	71%	86%	7,021	10,452	11,685	18,635	12%	66%	59%
Sweden	287,780	495,219	573,210	983,457	16%	99%	72%	2,255	3,871	4,359	6,398	13%	93%	47%
Switzerland	151,655	226,302	234,716	278,501	4%	55%	19%	1,188	1,769	1,785	1,812	1%	50%	2%
Taiwan	544,442	911,620	983,325	1,429,828	8%	81%	45%	3,816	7,087	7,857	9,934	11%	106%	26%
Tanzania	2,049	2,554	2,599	3,770	2%	27%	45%	38	43	42	55	-2%	11%	30%
Thailand	57,717	115,284	125,406	162,497	9%	117%	30%	481	1,242	1,272	1,266	2%	164%	0%
Turkey	103,293	112,329	135,350	203,776	20%	31%	51%	861	1,210	1,372	1,587	13%	59%	16%
Uganda	1,291	1,571	1,704	1,947	9%	32%	14%	24	26	27	28	5%	16%	3%
UAE	118,972	146,986	163,837	228,369	11%	38%	39%	834	1,143	1,309	1,587	15%	57%	21%
UK	2,197,264	2,962,458	3,389,253	4,939,827	14%	54%	46%	17,214	23,154	25,771	32,138	11%	50%	25%
US	16,029,380	23,004,100	24,273,540	36,878,270	6%	51%	52%	126,586	186,897	210,353	268,678	13%	66%	28%
Vietnam	38,703	77,738	72,135	114,807	-7%	86%	59%	589	1,247	1,234	1,551	-1%	110%	26%
Zambia	346	266	285	260	7%	-18%	-9%	6	4	5	4	4%	-28%	-18%

Note: Our model is dynamic and these numbers are subject to change and may not be identical to those in the hard copy of the report or previous editions

Final word

Andrew Shirley – Editor



In March last year, just after *The Wealth Report* was published, the world gasped when somebody paid the equivalent of almost US\$70 million in the cryptocurrency ether for the digital artwork you can see on page 84.

It was sold as a non-fungible token, or NFT – not something to hang on the wall, but a chunk of digital data on a blockchain. It was far from a one-off. By the end of 2021, billions of dollars of crypto art had been sold. *Collins English Dictionary* even made NFT its word of the year.

A sceptic at first, I’ve slowly come to terms with the fact that a different generation can value the virtual as highly as the tangible. Millions of young entrepreneurs

– my son, barely into his teenage years, has his own range of NFT art – are tokenising anything that moves and creating virtual products such as clothes, guns, cars and handbags that can be worn or used by buyers’ online avatars in the hope of making a quick buck.

Cynics say few of them will make serious money; most of the cash, or should I say crypto, will flow via commissions and fees to the platforms hosting these digital marketplaces.

That’s probably why big tech is so keen to persuade us that we are desperate to live our lives in the metaverse, sometimes described as a hypothetical iteration of the internet as a single, universal virtual world. It sounds dystopian to me, although one of our interviewees (page 9) does hold out hope for digital worlds where users are rewarded for sharing their data or playing games.

What isn’t hypothetical though, as we discuss on page 46, is the amount of money – hundreds of thousands of dollars in many cases – that people are paying for building plots in this embryonic digital ecosystem.

Virtual real estate may sound like a contradiction in terms but, along with NFTs and the metaverse, it’s something I’m sure we’ll be writing a lot more about in future editions of *The Wealth Report*.

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