

The Art Market 2022

An Art Basel & UBS Report

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Founder of Arts Economics

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Acknowledgments

The Art Market 2022 presents the results of research on the global art and antiques market in 2021. The information presented in this study is based on data gathered and analyzed directly by Arts Economics (artseconomics.com) from dealers, auction houses, collectors, art fairs, art and financial databases, industry experts, and others involved in the art trade. (The Appendix offers an outline of some of the main data sources used in the report.)

I would like to extend my gratitude to the many suppliers of data and insights that make this report possible. A critical part of this research every year is the global survey of art and antique dealers. I would like to say a very special thanks once again to Erika Bochereau of CINOA (Confédération Internationale des Négociants en Oeuvres d'Art) for her continued support of this research, along with the presidents of the dealer associations around the world who promoted the survey among their members in 2021. Thanks also to Art Basel for helping to distribute the survey. The completion of this report would not have been possible without the help of the individual dealers who took the time to support this research by completing the survey. I am very grateful to them all for their continued help and support. My special thanks also goes to those dealers who shared their valuable understanding of the art market through interviews and discussions during the year.

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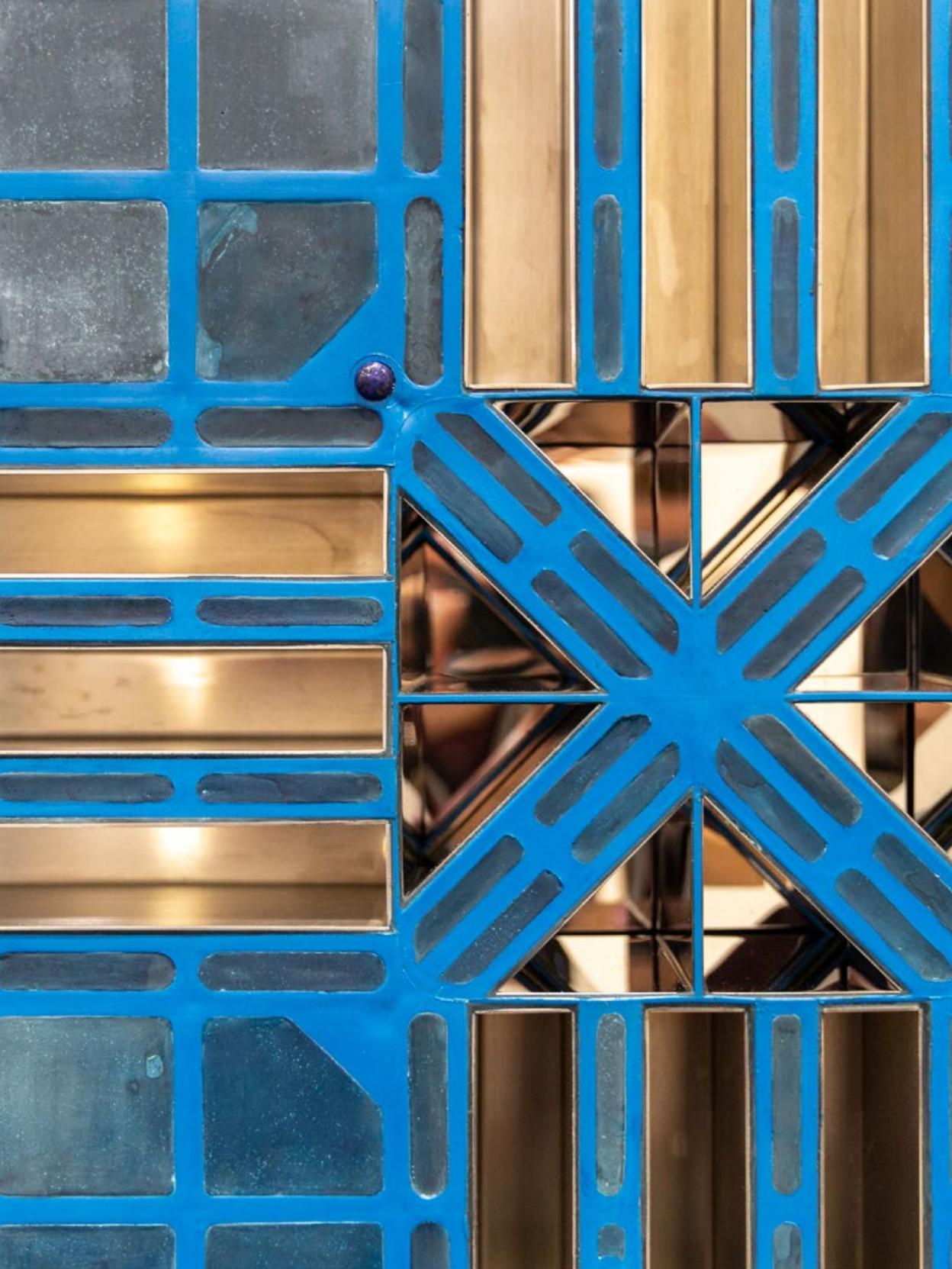
Data on NFTs was supplied by NonFungible.com and I am very grateful to Gauthier Zuppinger for his help and enthusiasm in allowing us access to his fascinating data. In addition, very special thanks to the two expert authors who shared their invaluable perspectives and knowledge on NFTs and their relationship to the art market: Amy Whitaker and Simon Denny.

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Dr. Clare McAndrew
Arts Economics



Director's Foreword

Analyzing the art market is never simple. Much of the data available to economists in other industries is not public within the art market, and sales are driven by sometimes rapidly shifting perceptions. Making things trickier is the fact that during 2021, the pandemic's impact varied enormously – in certain regions, borders were closed for much of the year, while in others, 'the new normal' arrived in summer.

For this sixth edition of *The Art Market*, produced in partnership with UBS, Dr. Clare McAndrew, Founder of Arts Economics, drew upon myriad sources to author the definitive report on the state of our complex business. Her findings clearly indicate the market recovered strongly in 2021, even surpassing pre-pandemic levels. Yet that recovery was uneven, and particularly strong for major auction houses and galleries in the top echelons. Holding to form, the critical mass of the market orbits around a relatively small number of incredibly high-priced pieces. Relatedly, the number of staggeringly wealthy individuals rose sharply, as did the number buying art. Once again, auction houses proved the most successful in attracting new buyers. That was not surprising in the context of the pandemic, given that auction action has long shifted from the salesroom to phones and online bidding – while galleries suffered disproportionately from the long drought of fairs and museum shows.

Digital remains a pivotal topic. As expected, the share of online sales by businesses in the art market declined in 2021 as in-person sales re-emerged – but the total value of online sales continued to grow, indicating that e-commerce is here to stay.

For the first time, this report digs deeply into NFTs. *Nota bene:* Most art-related NFT business takes

place outside the auction and gallery channels this report has historically covered – and by comparison it still remains a relatively small market. It is, however, radically more rife with speculation, with the exceptional growth in value in 2021 driven by short-term trading. Three-quarters of the value of art-related NFT business done last year on Ethereum-based platforms was resales, a sharp jump over 2020 – and hardly surprising given that, on average, art NFTs are owned for just over a month before being resold.

On behalf of Art Basel, I would like to thank Clare, our partners at UBS who support the publication and provide invaluable Investor Watch research, as well as all those who helped compile and produce the report. Finally, we thank the dealers and auction houses who participated in the survey and provided data, without which we could not present this report, which we hope you find to be intellectually interesting and a valuable resource.

As I write this, a human tragedy is unfolding in Ukraine, one which has shocked and enraged us not only as individuals but also as members of a global art community whose values – humanity, pacifism, freedom of expression, cultural understanding, and dialogue – stand in stark contrast with such an unprovoked act of aggression. Our thoughts and hearts are with those suffering in Ukraine, as well as those in Russia courageously protesting against this war.

Marc Spiegler

Global Director,
Art Basel

Foreword by UBS

Art has the power to unify us during difficult times, and this has felt more pertinent than ever in recent weeks. Just as the pandemic fog began to lift in some parts of the world, the tragedy of war cast its shadow over Ukraine and Europe. Nothing good can result from such tragedy but art can serve a higher purpose, as it has throughout history, helping us to mourn, to heal, and to remember the people and things we value.

Looking back to 2021, this Art Market report reflects on a year in which the art market proved its resilience. As the global economy rebounded, the art market returned to growth and recouped lost ground. The sector adapted admirably to pandemic-imposed constraints even as traditional channels like art fairs and galleries staged a comeback.

We saw the international art community embrace opportunities to come together with innovation and new ideas, collaborating in person once again as the artworld calendar quickly filled with events. Crowds rallied to art fairs, eager to reconnect. In a sign of resurging confidence triggering pent-up demand, New York auction houses saw the return of billion-dollar sales weeks, with landmark sales such as that of the Macklowe Collection epitomizing the market's momentum.

We also welcomed the evolution of the digital experience as a positive legacy of the migration online seen in 2020. Trends that were already underway accelerated. Despite the reopening of traditional sales channels, online sales stayed strong in 2021 compared to before the pandemic. NFTs cemented their position in the art market while new frontiers began to open, such as the metaverse.

The shift online also transformed buyer behavior and demographics. Different ways of purchasing art have enticed new buyer segments, with younger, tech-savvy collectors, often unknown to established galleries and fairs, entering the market and driving demand for rising art market stars. This more diverse buyer base, along with the overall increase in HNWI wealth, contributed to the year's strong performance and has enriched the sector as a whole.

UBS has been the Lead Partner of Art Basel for almost three decades, and since 2017 has proudly partnered with Art Basel to publish *The Art Market*. In times of profound transformation and uncertainty, expert insight and analysis are vital. We hope this publication will be a useful resource to help you navigate today's rapidly changing industry.

Our clients adapted throughout the year, with an increasing number expressing interest in art collecting with purpose. The pandemic and all of its consequences reconfigured how people live, work and express themselves. And this has forced us to rethink how we collect and engage with art, perhaps giving rise to an increased emphasis on sharing, supporting communities and establishing platforms for underrepresented artists.

Christl Novakovic

CEO UBS Europe SE and
Head Wealth Management Europe
Chair of The UBS Art Board
UBS, Lead Partner of Art Basel

Key Findings



Global Sales

\$ 65.1 b



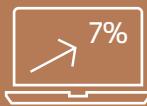
1. Following its biggest recession for 10 years in 2020, the global art market recovered strongly in 2021, with aggregate sales of art and antiques by dealers and auction houses reaching an estimated \$65.1 billion, up by 29% from 2020, with values also surpassing pre-pandemic levels of 2019.

2. All segments of the market grew in 2021, but the auction sector showed the strongest year-on-year advance, with public auction sales increasing by 47%. Private sales by auction houses were up by just over one third and the dealer market rose in value by 18%.

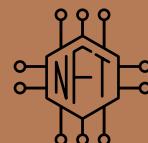
3. The US market retained its leading position, shifting up slightly to 43% of worldwide sales by value. Greater China was the second-largest art market with 20%, while the UK slipped back to third place at 17%.



4. The US art market recovered robustly in 2021, with sales increasing by 33% to just over \$28.0 billion. Sales in Greater China also saw significant growth of 35%, reaching \$13.4 billion, and the UK market increased by 14% year-on-year to \$11.3 billion. France had a particularly strong uplift, with sales up by 50% year-on-year to \$4.7 billion, their highest level in 10 years.



5. The online market continued to expand in 2021, growing by 7% to reach an estimated \$13.3 billion. Online sales accounted for 20% of sales in the art market, down by 5% in share year-on-year but still more than double the level of 2019 (9%).

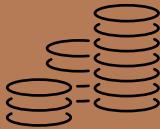


6. Outside of the art market's \$65.1 billion in turnover, sales of art and collectibles NFTs saw substantial growth in 2021. External sales in these two categories on NFT platforms on the Ethereum, Flow, and Ronin blockchains have grown from \$4.6 million in 2019 to \$11.1 billion in 2021. The value of sales for art-related NFTs expanded over a hundredfold year-on-year reaching \$2.6 billion.

Dealer Sales

\$ 34.7 b

1. After a decline of 20% in 2020, aggregate sales in the dealer sector reached an estimated \$34.7 billion in 2021, increasing by 18% year-on-year, but still below the level of 2019.



2. Some of the larger dealers, who experienced the greatest decline in sales in 2020, saw the most improvement, driven by ample demand from HNW collectors for highly priced works of art. The highest rise in values year-on-year was dealers with sales of between \$5 million and \$10 million (35%), while the smallest gains were experienced by the smallest dealers with turnover of less than \$250,000 (6%).



4. Just 6% of dealers had sold NFTs in 2021. A further 19% had not sold NFTs but were interested in doing so in the next one to two years, whereas just under half (46%) reported that they had not done so and had no interest in doing so in future. The remaining 29% were unsure whether they would sell NFTs in future or not.

5. In 2021, as the art fair calendar resumed, even with a reduced number of events and limited capacity, fair sales advanced to 29% of total dealer sales (including OVRs), up by 7% year-on-year, but still nowhere close to the 43% reported in 2019.

3. As sales picked up and dealers remained cost conscious, there was a significant rise in the share of businesses making more profit in 2021. Across all dealers, 55% were more profitable than in 2020, 21% were about the same, and 24% were less profitable.

6. The corollary of the return of gallery exhibitions and fairs was that online sales by dealers lost share, from 30% in 2020 to 20% in 2021 but still well above the level of 2019 (12%).

Auction Sales

\$26.3 b ↑32%



1. After a challenging year in 2020, the auction sector rebounded strongly in 2021, with high demand and strong sales both online and offline, particularly at the high end of the market, as well as an influx of new buyers. Sales at public auction of fine and decorative art and antiques reached an estimated \$26.3 billion, an increase of 47% on 2020.

2. In 2021, even with a fuller live auction calendar, private sales continued to flourish, increasing by 32% to an estimated \$4.1 billion, including \$3.0 billion reported by Christie's and Sotheby's. Total sales conducted by auction companies, including both public and private sales, were estimated to have reached \$30.4 billion in 2021, up by 45% on 2020 and 10% on 2019.

3. The largest international auction hubs remained the US, China, and the UK, with a dominant share of 78% of public auction sales by value. China was the largest market with a 33% share (down by 3% year-on-year), marginally ahead of the US (32%).



4. NFT sales entered the auction sector, but at limited values so far. Christie's NFT sales totaled \$150 million, including the landmark sale of Beeple's *Everydays: The First 5000 Days* (2021) for \$69.3 million in March. Sotheby's NFT sales reached \$80 million. Only 5% of the second-tier auction houses surveyed had sold NFTs in 2021, although 28% had not but were planning to do so in the next one to two years.

\$ 6.7 b

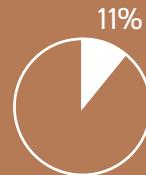


5. Post-War and Contemporary art was the largest sector of the fine art auction market in 2021, with a share of 55% of the value of global fine art auction sales. Sales totaled \$6.7 billion, up by 42% year-on-year. Within the sector, sales of works created in the last 20 years reached \$2.5 billion at auction, more than doubling in value from 2020.

6. Modern art was the second-largest sector by value in the fine art auction market in 2021, with a share of 22%. Sales improved in 2021, increasing by 23% in value to \$2.7 billion. These sales included the highest selling lot of the year, Picasso's *Femme Assise près d'une Fenêtre (Marie-Thérèse)* (1932) for \$103.4 million at Christie's New York.

Collectors

\$274k > \$1m



1. Surveys of 2,339 HNW collectors conducted by Arts Economics and UBS Investor Watch across 10 markets showed their spending increased substantially in 2021, reinforcing their importance in maintaining the strength of the art market during the pandemic. The median expenditure on fine art, decorative art, and antiques rose from \$72,000 in 2019 to \$126,000 in 2020, before more than doubling in 2021 to \$274,000.

2. In 2021, just over one third of HNW collectors had spent over \$1 million on art and antiques, up from 20% in 2020 and more than double the level in 2019. Mainland China had the highest share of spending at this level (44%), and there were also high levels in Germany (38%), France, and the US (both 36%).

3. While traditional mediums dominated in terms of value in 2021, 11% of HNW collectors' spending was on digital art. A small number of young collectors spent significant amounts on digital art, with 5% of Gen Z and 4% of millennial collectors having spent over \$1 million.



4. 74% of HNW collectors had purchased art-based NFTs in 2021. For those who had purchased NFTs, the median number summed over all categories was 13, including four related to art. The median expenditure across all NFTs was \$24,000, with 37% of that (or \$9,000) on art.

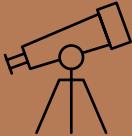


5. Dealers remained the most commonly used channel for purchasing art in 2021, with 76% of HNW collectors having purchased via a dealer. The shift to online was evident, with buying directly through a dealer's website or OVR more widely used (44%) than in-person gallery sales (42%). However, if choosing between offline and online, most collectors (69%) still preferred to view art for sale in person.

46%

6. HNW collectors reported that 46% of their total spending in 2021 was at dealers, galleries, or art fairs and 20% at auctions. The spending at art fairs was split between live events (9%) and OVRs (7%), while sales at dealers were divided between their galleries (13%), their websites or OVRs (10%), and 7% by phone or email.

Conclusions and Outlook



1. When asked about their plans for 2022, the majority of HNW collectors (53%) were planning to buy art, down by 4% from those planning to do so during 2021. 39% also planned to sell works from their collections in 2022.



2. The pandemic encouraged philanthropic giving among some HNW collectors, with a rise in the share intending to donate works to a museum in 2022, from 29% in 2021 to 43% in this survey, with the highest in France (56%) and the US (50%).



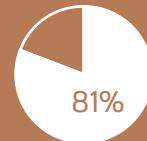
3. The growing interest in digital art was very evident, particularly for younger collectors. Over half of the HNW collectors surveyed (56%) were planning to buy digital art in 2022, and this was highest for millennial collectors (61%), and in Taiwan (71%), Singapore (62%), and the UK (61%).



4. There are no signs that the interest in NFTs will abate in 2022. 88% of HNW collectors said they were interested in purchasing NFT-based artworks in future, and just 4% were not at all interested.



5. On the sales side, most dealers were optimistic about their prospects in 2022, with 62% predicting an improvement in sales, 27% expecting them to be about the same as 2021, and 11% anticipating a decrease.



6. There was also optimism in the auction sector regarding 2022, with 81% of the second-tier auction houses expecting sales to improve and only 6% predicting a decline.



The Global Art Market in 2021



Key Findings

The Global Art Market in 2021

- 1.** Following its biggest recession for 10 years in 2020, the global art market recovered strongly in 2021, with aggregate sales of art and antiques by dealers and auction houses reaching an estimated \$65.1 billion, up by 29% from 2020, with values also surpassing pre-pandemic levels of 2019.
- 2.** All segments of the market grew in 2021, but the auction sector showed the strongest year-on-year advance, with public auction sales increasing by 47%. Private sales by auction houses were up by just over one third and the dealer market rose in value by 18%.
- 3.** The US market retained its leading position, shifting up slightly to 43% of worldwide sales by value. Greater China was the second-largest art market with 20%, while the UK slipped back to third place at 17%.
- 4.** The US art market recovered robustly in 2021, with sales increasing by 33% to just over \$28.0 billion. Sales in Greater China also saw significant growth of 35%, reaching \$13.4 billion, and the UK market increased by 14% year-on-year to \$11.3 billion. France had a particularly strong uplift, with sales up by 50% year-on-year to \$4.7 billion, their highest level in 10 years.
- 5.** The online market continued to expand in 2021, growing by 7% to reach an estimated \$13.3 billion. Online sales accounted for 20% of sales in the art market, down by 5% in share year-on-year but still more than double the level of 2019 (9%).

The Global Art Market in 2021

6. Outside of the art market's \$65.1 billion in turnover, sales of art and collectibles NFTs saw substantial growth in 2021. External sales in these two categories on NFT platforms on the Ethereum, Flow, and Ronin blockchains have grown from \$4.6 million in 2019 to \$11.1 billion in 2021. The value of sales for art-related NFTs expanded over a hundredfold year-on-year reaching \$2.6 billion.

7. In 2020, the bulk of art-related NFT transactions by value (75%) were primary sales, but, in 2021, the context changed dramatically, with value concentrated on resales (73%). These highly liquid and continuously trading NFT marketplaces have attracted very speculative buyers, and on average, art-based NFTs are bought and resold within around one month (versus the average resale period on the art market of 25 to 30 years).

1.1 | Overview of Global Sales

Following its biggest recession for 10 years in 2020, the global art market recovered strongly in 2021, with aggregate sales of art and antiques by dealers and auction houses reaching an estimated \$65.1 billion. This represented an increase in sales of 29% from 2020, with values also surpassing pre-pandemic levels of 2019.¹

The COVID-19 pandemic created challenges and uncertainties for art markets globally, with restrictions on operations, travel, and events all contributing to a contraction in sales of 22% in 2020 to \$50.3 billion. During this period of crisis, the event-driven market shifted online and dealers and auction houses significantly intensified digital strategies in order to maintain sales, successfully reducing some of the negative impact and ensuring that the art market fared considerably better than some other industries which rely heavily on travel and events.

Along with the difficulties encountered over the last two years, the pandemic was also seen as creating a window of opportunity and impetus for change, with much optimism in 2021 about restructuring market hierarchies and innovation in the industry as organizations considered new ways of operating. But rather than 2021 offering a return to pre-pandemic conditions and an opportunity to test how lasting some of the changes were, the year was marked with continued uncertainty as new variants of COVID-19 emerged and periodic lockdowns continued, and the events that went ahead did so often under very different conditions. Many businesses successfully adjusted to a new two-tier system of online and offline sales and events, but as demand and sales gained momentum again, it became clear that the digital shift had done little to reduce the market's hierarchies, and the high end began once again to pull away from the rest of the market,

**The global art market recovered strongly
in 2021, with aggregate sales of art
and antiques by dealers and auction houses
reaching an estimated \$65.1 billion**

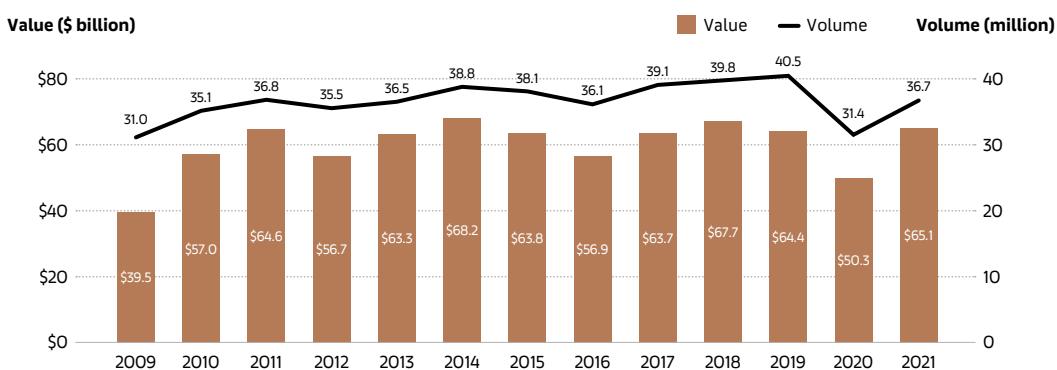
¹ A large and growing number of sales also happened outside the art market in 2021, with significant trading on NFT platforms. These sales accounted for an additional \$2.6 billion in art-related NFTs and \$8.6 billion in collectibles on the Ethereum, Flow, and Ronin blockchains (including only qualified sales). Sales of NFTs are not included in the aggregate art market figures (of \$65.1 billion) if they did not occur through a gallery, dealer, or auction house, but are discussed in more detail in Section 1.4.

with an even denser concentration on fewer artists and businesses in most sectors. While the rapid advance in online sales has been one of the main findings over the last two years, this was the continuance of a trend already underway, and while facilitating more sales and more continuous access to an expanding global audience, it does not yet seem to have radically changed a lot of the structures within the art trade.

Prior to 2020, the last major recession was in 2009 when sales fell in value by 36% to a low of \$39.5 billion, as the fallout from the global financial crisis affected nearly all parts of the market. The market bounced back strongly in 2010, with a boom in Mainland China and strong sales in the US seeing values rise to \$64.6 billion by 2011. The Chinese market's boom ended in 2012 with an ensuing slowdown in global values, but strong sales elsewhere for the next two years drove the market to a peak of \$68.2 billion in 2014. From this point, performance diverged between regional art markets and there was more muted annual sales growth overall.

The market showed great resilience under continuing uncertainty in 2021, with the recovery buoyed by robust growth in the auction sector, where sales of high-end artworks provided a significant uplift in value

The market was already under some pressure prior to the COVID-19 outbreaks of 2020, as geopolitical tensions and economic uncertainty negatively affected sales in 2019, with a drop in values of 5% to \$64.4 billion. However, the onset of the pandemic in early 2020 created a period of unprecedented crisis, with businesses forced to close their physical spaces, and art fairs, live auctions, and other events, which had become pivotal for sales in recent years, cancelled. Despite finding ways to maintain trading online, the pandemic had a deep and profound effect on businesses in the art trade. The market showed great resilience under continuing uncertainty in 2021, with the recovery buoyed by robust growth, particularly in the auction sector, where secondary market sales of high-end works of art provided a significant uplift in value.

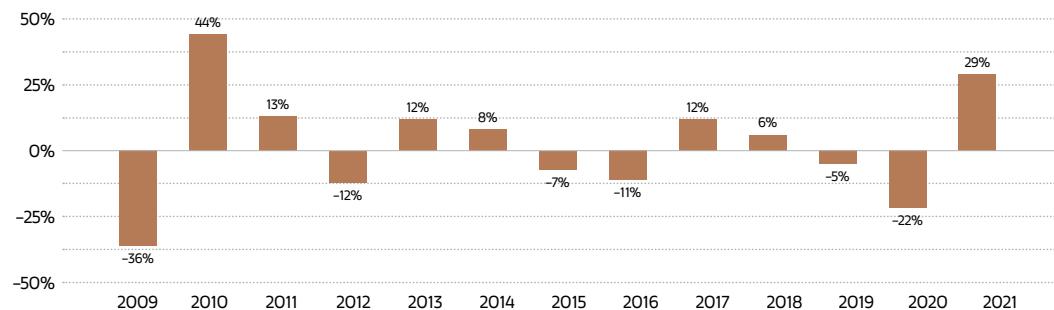
Figure 1.1 | Sales in the Global Art Market 2009–2021

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As in 2010, the market's rebound exceeded its decline, bringing sales in 2021 to just above pre-pandemic levels, driven by strong supply at the high end as well as ample demand, with increases in high net worth (HNW) wealth encouraging discretionary purchasing.

In the last few years, there has been a notable divergence in performance between the auction and dealer sectors, with dealer sales (covering both the primary and secondary markets) outperforming public auctions in terms of sales growth in 2018 and 2019, as the less certain economic and political context steered more vendors to sell privately. Both segments declined in the crisis of 2020, with public auction sales down by 29% and dealers declining by 20%. Going against trend, private sales by auction houses rose by over a third of their value. In 2021, all segments grew, but it was the auction sector that showed the strongest year-on-year advance, with public auction sales increasing by 47%. Private sales by auction houses were up by just over one third and dealers advanced by 18%.

Combining all sales (both private and public), the auction sector accounted for 47% of the global market by value in 2021, up 5% in share year-on-year, while dealers and galleries (including all online and offline sales of art and antiques in the primary and secondary markets) were 53%. The division between public and private sales varies widely between different regions and sectors. The boundary between these segments has also become less defined, with significant overlap

Figure 1.2 | Growth in Sales by Value in the Global Art and Antiques Market 2009–2021**% change in sales by value**

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between auction and dealer businesses as the network of sellers and transactions expands, both online and offline. A detailed analysis of the dealer and gallery market is given in Chapter 2, and Chapter 3 examines the auction sector, focusing on sales at public auctions.

After a substantial dip of 23% in 2020, the volume of sales also recovered in 2021, increasing by 17% to an estimated 36.7 million transactions in the auction and dealer sectors. A very significant number of transactions also happened outside of these art market structures, with online platforms supporting a growing number of sales of art and collectibles from artists, creators, and re-sellers. Sales resulting from the surge of popularity in non-fungible tokens (NFTs) occurred largely on platforms outside of the art market, and are discussed in more detail in Section 1.4.

The volume of sales also recovered in 2021, increasing by 17% to an estimated 36.7 million transactions



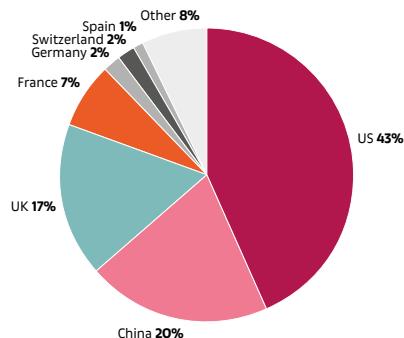
1.2 | Regional Market Performance

The three largest art markets, the US, Greater China, and the UK, continued to account for the bulk of sales in 2021, with a combined share of 80%.

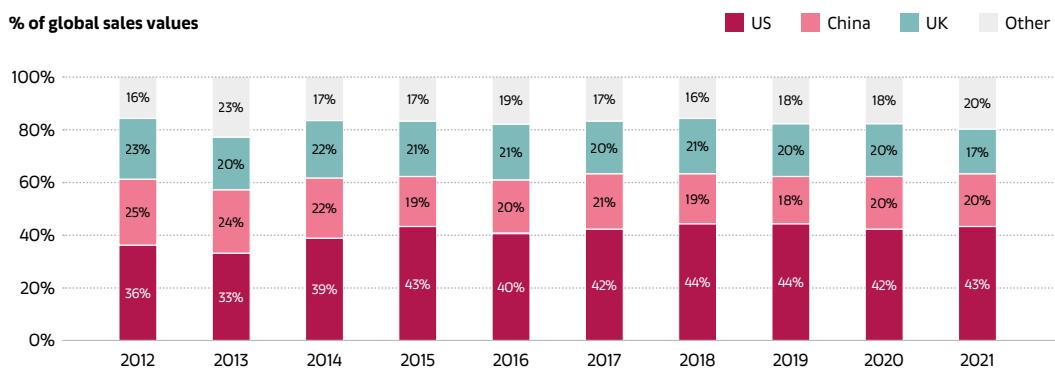
The US market retained its leading position, shifting up slightly to 43% of worldwide sales by value. Greater China maintained its share of 20% and was the second-largest art market, while the UK slipped back to third place. Having been on par with Greater China in 2020, the UK's market share fell by 3% year-on-year to 17%, its lowest in a decade, with a weaker recovery in sales than its two major peers. After a significant decline in 2020, the French market gained ground advancing by 1%, to 7%. Sales in the EU (now excluding the UK) had a global share of 14%, also up by 2% year-on-year.

After losing almost one quarter of the value of its sales in 2020, the US art market recovered robustly in 2021, with sales increasing by 33% to just over \$28.0 billion. While some changes were expected at the start of the year that might have hampered growth, from increased taxation on wealthy individuals to anti-money laundering regulations on the art trade, few of these materialized and the market was supported by strong supply, particularly at the high end, and ready demand as the base of HNW wealth expanded. The US has been one of the strongest-performing markets of the past decade, driving the art market's recovery from the global financial crisis in 2010, with continuing growth in sales up to 2015. A contraction at the high end caused the market to fall by 16% in 2016, however, this was followed by a rebound to a historic peak of just under \$30 billion in 2018. The next two years saw declining values: a substantial fall in auction sales in 2019 bringing the market down by 7%, followed by a 24% loss of value in 2020 in the challenging context of the COVID-19 pandemic and other wider economic and political uncertainties. The recovery in 2021 made up for the loss of value in 2020 and put the market back on par with sales achieved in 2019. With this growth, the US market had increased by 42% in value over a decade and more than doubled in size from the low point in 2009.

Figure 1.3 | Global Art Market Share by Value in 2021



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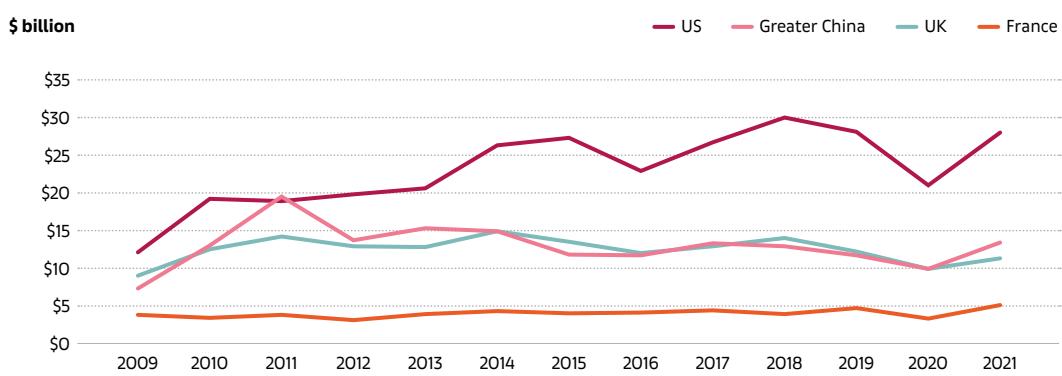
Figure 1.4 | Global Art Market Share of the US, UK, and Greater China 2012–2021

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The US acts as a key global hub for the art trade, with the most expensive artworks in the world brought to New York for sale to both local and international buyers. The value of imports of art and antiques into the US rose by 60% year-on-year in 2021, and although they were still below 2019 levels (at \$8.3 billion in 2021 versus \$11.8 billion in 2019), the role of the New York market as the headquarters for the international trade in higher-priced works of art was very evident.²

Sales in Greater China also saw a significant growth of 35% reaching \$13.4 billion, and pushing ahead of the UK market in the global ranks. There has been considerable reshuffling between the UK and Greater China in recent years, with the Chinese market leading the UK during its boom years between 2010 and 2014. After several years of parity, the UK had pulled ahead in 2018 and 2019, as wider economic and trade issues in Mainland China and political unrest in Hong Kong SAR (China) weakened sales. In 2020, Greater China's sales declined by 12% to \$9.9 billion, its third year of falling values, but a more moderate contraction than its major peers. The rise in sales in 2021, measured in US dollars, was aided partially by a strengthening Yuan. However, it was primarily driven by strong auction sales and continued growth and development in the gallery sector. The infrastructure of the market has continued to expand in Mainland China, with the opening of at least 25 new auction businesses since 2020, close to 30 new fine art galleries with dedicated exhibition spaces in 2021,

² Data on US trade from USITC DataWeb.

Figure 1.5 | Sales in the Major Art Markets 2009–2021

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and the expansion of other collaborative exhibition and gallery spaces, including ART Tower launched by the West Bund Group in 2021, a 93,000 square meter exhibition space for galleries and other services. Public and private museums have also continued to open, with at least seven new institutions established in 2021 in Hong Kong SAR (China) and Mainland China. These developments, along with strong sales by incumbents, helped to restore aggregate values to around 2017 levels. However, sales still remained more than 30% below their peak in 2011.

While Hong Kong SAR (China) has acted as the key hub for regional and international trade in Asia, there was evidence of attempts to boost inward trade into Mainland China in 2021, with the announcement by the Tariffs Commission of the Ministry of Finance of the People's Republic of China that, starting from January 2022, it will implement a zero import tariff on artworks that are over 100 years old, a move believed to be designed to stimulate the development of the domestic cultural relics market.

The UK art market has endured a very challenging period for the last two years, dealing with the impact of the COVID-19 pandemic as well as its formal exit from the EU in January 2021. Following two years of declining sales in 2019 and 2020, the UK market increased in value by 14% year-on-year

to \$11.3 billion in 2021. While this recovered some of its losses from the previous year, sales were still below those achieved in 2019 (\$12.2 billion), and the weaker uplift than Greater China or the US meant its share was down by almost 3% and shifted it to third place in terms of global rank.

From January 2021, all imports into the UK from EU states have been subject to VAT and other charges, which has created concerns for businesses in the art market that trade with and from Europe. The success of art market hubs such as the UK has relied on their ability to attract the most expensive works of art for sale from sellers throughout the world, and therefore, like New York, the UK is dependent both on imports of art and international buyers. Imports of art and antiques were recorded by the HM Revenue and Customs (HMRC) as \$2.1 billion in 2020, down by one third on 2019. The bulk of these (89% by value) were extra-EU from major partners such as the US, Mainland China, and Hong Kong SAR (China), which were unaffected by Brexit. However, in 2021, unlike the US, these imports did not improve, and fell a further 18%, leaving them at almost half the value achieved in 2019.³

While the auction data discussed in Chapter 3 shows that much of the high-value trade potentially lost to London was to the benefit of the hubs outside Europe in 2021, most notably the US, some domestic EU art trade may have also been transferred outside of the UK to other EU states, boosting markets such as France and Germany. After a drop of over 30% in 2020, sales in France had a particularly strong uplift in 2021, increasing in value by 50% year-on-year to \$4.7 billion, bringing the market to 5% above its level in 2019 and its highest point in 10 years, with increasing sales by international and local auction houses and a strong recovery reported by dealers. Sales in Germany, Spain, and Italy also saw strong, double-digit growth. Sales in the EU fell by 47% to \$8.5 billion, however, 2021 represented the first year that the EU has not included the UK. Measured without the UK in both 2020 and 2021, sales in the EU-27 advanced by 37% year-on-year.

³ The change here is measured in GBP terms, and based on data on imports from the HMRC covering imports of all items included in HN Code 97 works of art, collectors' pieces, and antiques.

Exhibit 1: Art Market Legal Issues in 2021

Withers Worldwide*

The US Art Market

Throughout 2021, various federal tax reform proposals were introduced in Congress which would have reshaped the estate planning landscape and greatly increased the tax obligations of HNW collectors in the US. However, due to legislative gridlock, none were ultimately passed. However, there were a number of other areas of regulation that brought the art market and its practices into greater focus.

Anti-Money Laundering Regulations

Congress mandated that the Financial Crimes Enforcement Network ('FinCEN'), an agency within the US Department of the Treasury, issue regulations applying the *Bank Secrecy Act's* compliance provisions to dealers in antiquities as part of the *Anti-Money Laundering Act of 2020*, enacted in January 2021. Under these regulations, dealers in antiquities are treated like banks or other financial institutions for purposes of implementing compliance systems to prevent money laundering, terrorist funding, and other illicit financial activity. Congress also directed that FinCEN perform a study of the facilitation of money laundering and the financing of terrorism through the trade in works of art in the broader market.

In September 2021, FinCEN issued an *Advance Notice of Proposed Rulemaking* to solicit public comment on a range of questions related to the implementation of amendments to the *Bank Secrecy Act* regarding the trade in antiquities. Christie's and Sotheby's provided public comments suggesting a monetary threshold of €10,000, but Bonhams and other businesses advocated this was too low. Others were concerned with the definition and dating of antiquities, and there was discussion regarding how businesses establish ultimate beneficial owners (UBOs) under the new regulations, with differences of opinion between some of the largest businesses.⁴

Although FinCEN has not yet issued its regulations for antiquities dealers, it published its much-anticipated study of the broader art market in February 2022. This concluded that there was limited evidence of money laundering and little risk of terror financing through the sale of high-value art. Nevertheless, FinCEN did caution that institutions and dealers with annual sales

⁴ Sotheby's advocated that the antiquities trade be given access to registers, Bonhams stated that governments should establish monetary registers of UBOs doing business in their jurisdiction, and Christie's stated that businesses should be able to rely on the party that provided the UBO information.

of \$500,000 to \$1 million and particularly art finance providers would be those most likely to face some regulation. They also urged art market participants to adopt non-regulatory measures, including a private sector information-sharing program of UBO data, to encourage transparency in the market, an implicit signal that the art market's self-policing efforts would inure to its benefit in the form of less onerous future regulation.

Technology-Related Developments

The multi-million-dollar sale of Beeple's NFT at Christie's New York in March 2021 catapulted the traditional art market into a technological era, expanding the definition of art, and welcoming new buyers and sellers. Both artists and dealers began entering the NFT market, creating and producing digital art that could be tokenized. From a legal perspective, the issues surrounding these 2021 digital projects were a moving target, as the legal consequences caught up with the business and technological developments. Apart from contractual issues with NFT platform terms and conditions (or lack thereof), the development of the blockchain-coded SMART contracts and their incorporation into current legal frameworks, and many novel and complex tax, intellectual property, authenticity, and securities issues arose in 2021 and will require equally complex legal solutions.

Due to the pseudonymous nature of buyers and sellers in NFT transactions, fraud and anti-money laundering and other regulatory issues arise in relation to the sale of some artworks and the use of cryptocurrency. Reports suggest that 'wash trading' (artificially increasing the value of an NFT by being on both sides of the transaction) and money laundering are not uncommon. 'Rug-pulls' are also increasingly common, when initial NFT collections sell out for huge gains on the basis that buyers will receive free NFTs or other perks in subsequent drops, but then the individuals behind the collections 'cut and run' leaving the original NFT purchasers with worthless NFTs.

2021 also saw the spreading of fractional-ownership projects involving NFT technology, with many start-ups offering fractional investment in both physical and digital artworks, with NFTs used as a share certificate registered on the blockchain. From a regulatory point of view, while many countries lack specific regulation on NFTs, the sale of NFTs representing shares of fractionalized underlying assets for investment purposes are likely to be regarded as financial products and hence subject to the jurisdiction's market regulations on these as well as consumer laws on distanced sale of financial services.⁵

⁵ Given the market success of crypto-assets, the European Commission is currently working on a regulation proposal on markets in crypto-assets aimed at regulating the trading in cryptocurrencies and tokens. (See *Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937 - COM/2020/593 final.*) It seems likely therefore that they will also be called to address the regulation issues surrounding the NFTs.

Decentralized autonomous organizations (DAOs) also grew in popularity during the year. DAOs allow groups of people on the internet to form chat groups that then decide how to pool together capital for investments using a single cryptocurrency wallet. Unlike traditional organizations, DAOs mainly use SMART contracts and blockchain technology to administer the structure and rules of each organization, and their decentralized structure means that they do not rely on traditional hierarchies seen in most organizations such as boards of directors. DAOs were mainly active in the collectibles market, however, it seems likely they will interact with the art market in 2022.

From a regulatory perspective, cryptocurrency was also addressed in the *Anti-Money Laundering Act of 2020*, and FinCEN released a publication entitled *Anti-Money Laundering and Countering the Financing of Terrorism National Priorities* in 2021. The priorities specifically address virtual currency considerations and noted their growth as the currency of preference in a wide variety of online illicit activity.⁶ Given FinCEN's clear concern with cryptocurrency, compounded by the agency's regulation of dealers in antiquities, we would expect that regulations on NFT platforms facilitating buyers and sellers in trades of tokenized art (through the payment of cryptocurrency) to be impending. Furthermore, we would expect FinCEN to also keep an eye out for developments with DAOs given their unique non-traditional organizational structure.

Art Copyright Cases

With the emergence of NFTs in the art, collectibles, fashion, and entertainment space, there was also an uptick in copyright infringement cases related to the use of images in new technological mediums. It is likely this trend will continue in 2022 and could result in either a hurdle or gateway for the NFT and virtual reality markets.

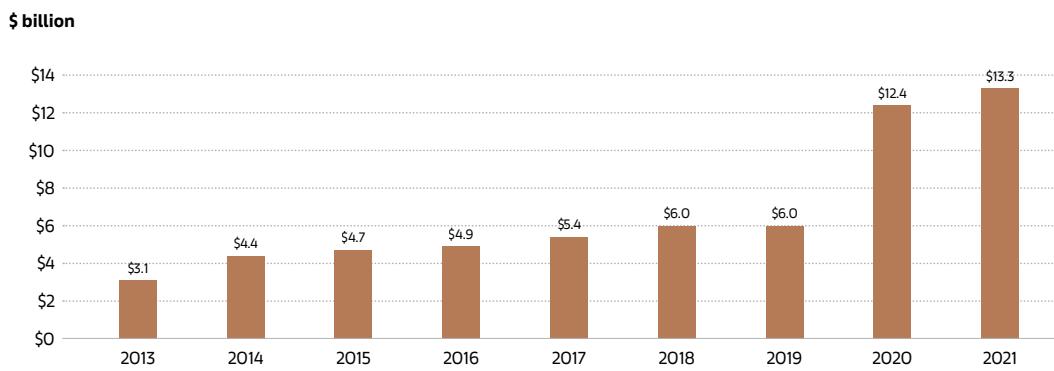
Copyright issues also came into focus in the traditional art market in 2021, most notably with the case of *Andy Warhol Foundation v. Goldsmith*. In August 2021, the US Court of Appeals for the Second Circuit held that a series of 16 screen prints by Andy Warhol depicting the recording artist Prince were not a fair use of Lynn Goldsmith's photographs of Prince (that were used by Warhol for his screen prints) and were therefore infringements of Goldsmith's photographs. The decision reversed a lower court's prior judgment for the Andy Warhol Foundation, and held that the Warhol works were not 'transformative' under the fair use analysis, because a 'secondary work's transformative purpose and character must, at a bare minimum, comprise something more than the imposition

⁶ See [fincen.gov/sites/default/files/shared/AML_CFT%20Priorities%20\(June%2030%2C%202021\).pdf](https://fincen.gov/sites/default/files/shared/AML_CFT%20Priorities%20(June%2030%2C%202021).pdf).

of another artist's style on the primary work such that the secondary work remains both recognizably deriving from, and retaining the essential elements of, its source material.⁷ The Andy Warhol Foundation has appealed to the US Supreme Court and the outcome of this case is likely to have a profound effect on appropriation artists' use of other artists' and photographers' works.

* Contributors: Diana Wiericki, Georges Lederman, Amanda Rottermund, Davis Turner, and Sarah Barker.

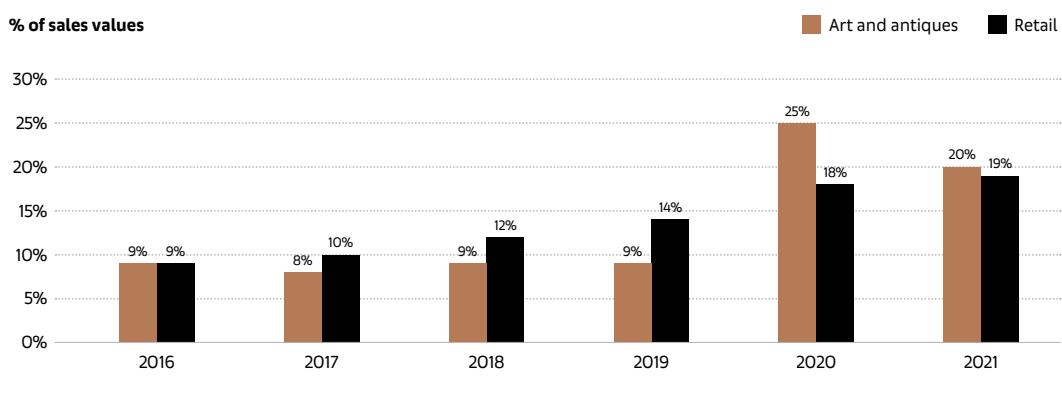
⁷ Andy Warhol Found. for Visual Arts, Inc. v. Goldsmith, 11 F.4th 26, 42 (2d Cir. 2021).

Figure 1.6 | Online Sales of Art and Antiques 2013–2021

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1.3 | Online Sales

The growth of online sales has been one of the most important developments in the art market over the last two years. While e-commerce was already steadily advancing prior to the onset of the COVID-19 pandemic, despite the substantial contraction of sales overall in 2020, online art sales reached their highest-ever recorded level of \$12.4 billion, doubling in value from 2019. As businesses, events, and travel were restricted from operating, the pivot to online communications and sales became critical for many businesses' survival. Traditional galleries and auction companies increased their engagement in digital sales and marketing, and collectors began to use e-commerce in a more mainstream way. Art fairs' online viewing rooms (OVRs) and a variety of third-party platforms also expanded the range of digital options for sales within the art market. While some of this expansion was undoubtedly a knee-jerk reaction to the particular context, growth continued in 2021, and most businesses in the art market, having invested more in their online presence and e-commerce functionality, maintained strong online sales alongside their return to live sales and exhibitions. Both dealers and auction houses on aggregate reported a smaller share of online sales in 2021 (discussed in Chapter 2 and 3), but the overall growth in values meant that the online market continued to expand, increasing by a more moderate 7% in 2021 to an estimated \$13.3 billion.

Figure 1.7 | Share of Online Sales in the Art Market versus General Retail 2016–2021

© Arts Economics (2022) with data from eMarketer.com

The online market continued to expand, growing by a more moderate 7% in 2021 to an estimated \$13.3 billion

The share accounted for by online sales in 2021 was 20% of total sales, down by 5% year-on-year but still more than double the level of 2019 (9%). Online sales are defined here as including sales by galleries, dealers, and auction houses made online, either through their own websites, OVRs, other platforms, or via email, as well as those made through third-party platforms and art fairs. It includes sales made by traditional offline dealers and auction houses online as well as those made by online-only galleries and auction companies in these markets selling on their own account.

In 2020, the growth in online sales in the art market meant that its share of e-commerce (at 25%) exceeded that of aggregate global retail for the first time, at 18%. In 2021, they were almost on par with online art sales accounting for 20% of global art values, and global retail marginally lower at 19%. After an advance of 26% in 2020, growth in global retail e-commerce was slightly slower in 2021, increasing by 16% to \$4.9 trillion. It is estimated that growth will continue to moderate but stay positive, and that sales could reach \$7.4 trillion by 2025 and make up 24% of all retail sales.⁸ It seems likely that the trajectory of online sales in the art market will also stay positive, and unlikely that this share will return to pre-pandemic levels as collectors, dealers, and auction houses have become more accustomed to a higher level of digital interaction. Therefore, a very significant outcome of the pandemic and the changes it brought to the market in the last two years is that it provided the impetus to force the art market, a previous laggard in terms of its adoption of e-commerce, to catch up with other retail industries. Online sales in the dealer and auction sectors are discussed in more detail in Chapters 2 and 3.

The share accounted for by online sales in 2021 was 20% of total sales in the art market, down by 5% year-on-year but still more than double the level of 2019

⁸ Statistics on general retail are taken from E-Marketer (2022) 'Global E-Commerce Forecast 2022', available at emarketer.com.



1.4 | Art and NFTs in 2021

Digital technologies have also had an impact on sales outside the traditional infrastructure of galleries and auction houses. The effect of technologies on cultural markets has been discussed in terms of 'platformization' (or the reorganization of cultural work, practices, and creativity around platforms) and 'disintermediation' (the potential reduction in the importance of gatekeepers and intermediaries, as online platforms allow more direct communications and exchanges between consumers and producers).⁹ However, the impact of disintermediation within the art market has been relatively weak to date, even over 2020 and 2021. Much of the growth of online sales in the art market has been sales conducted directly via existing intermediaries, through dealers' and auction houses' own websites and platforms. Third-party platforms have been important but have simply added another layer of intermediation, acting as intermediaries to the market's existing intermediaries or even in some cases directing buyers to sales that still take place on dealers' own websites and platforms.

While most dealers and auction houses were generally positive about the impact NFTs have had in expanding interest in art and collectibles among wider segments of collectors, their surge in popularity has, as yet, had a relatively limited impact within these businesses in terms of the value of their sales. The top-tier houses of Sotheby's and Christie's sold \$230 million in NFTs in 2021 (against gross revenues of over \$14 billion). In surveys of the second-tier auction houses, only 5% had dealt in any NFTs, with a similar small minority of 6% of the businesses in the dealer sector (and in both cases at a very limited scale in terms of value).

However, the impact of platforms selling NFTs outside the art market has been notable and generated substantial sales in 2021, creating active primary and secondary markets outside the traditional framework. Although transactions via NFT platforms are not included in the total value of the art market estimated in Section 1.1 (as they occur outside of galleries, dealers, and auction houses), an analysis of some of the sales that took place on these platforms shows the rapid advance in activity in 2021.

Data on NFT platforms is supplied for this report by NonFungible.com, which tracks qualified sales of all NFTs on the Ethereum, Flow, and Ronin blockchains. This data shows the phenomenal increase in sales over the past two years, with a huge advance in value in 2021. NFT platforms trade in multiple categories of collectibles including art, sports, music, and entertainment

⁹ See for example, Poell, T., Nieborg, D., and van Dijck, J. (2019). 'Platformisation,' *Internet Policy Review*, 8(4), and Kenny, M. and Zysman, J. (2016) 'The Rise of the Platform Economy,' *Issues in Science and Technology*, 32(3).

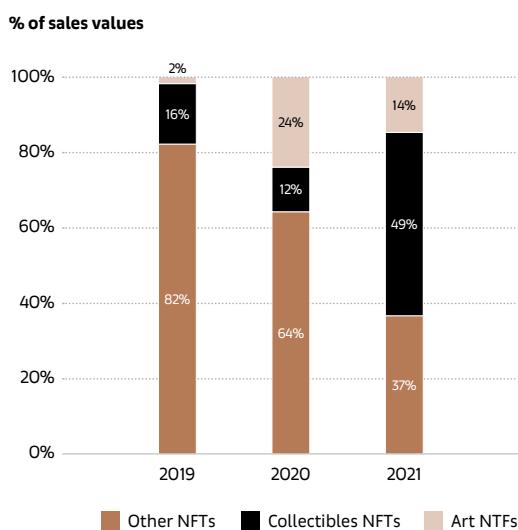
collectibles and a range of in-game and in-world digital items. In 2019, art-based NFTs made up just 2% of the value of all NFT sales, with a further 16% accounted for by collectibles.

However, their popularity and value escalated rapidly, and by 2020, art-based NFTs had a greater share (24%) than collectibles (12%). By 2021, art and collectibles made up the majority of the value of NFT sales (63%), but art once again was the smaller component of sales of the two (with 14%).¹⁰

Sales of both art and collectibles NFTs have grown from \$4.6 million in 2019 to \$11.1 billion in 2021. These are sales external to the art market as defined in this report, taking place on NFT platforms, and hence not included in the \$65.1 billion figure (from Section 1.1), but clearly making up a very large addition to the wider sales taking place related to art in 2021.

The value of sales for art-related NFTs expanded over a hundredfold in 2021 year-on-year reaching \$2.6 billion, with even greater growth in collectibles, to \$8.6 billion. The volume of transactions also expanded rapidly, growing from just over 755,760 in 2019 to 5.5 million, with collectibles heavily dominating the number of sales (85% of transactions in 2021).

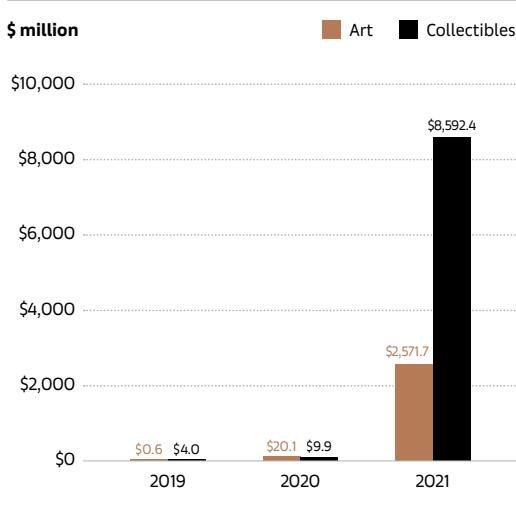
Figure 1.8 | Share of Value of Art and Collectibles in All NFT Sales 2019–2021



© Arts Economics (2022) with data from NonFungible.com

¹⁰ Across all categories of NFTs, including those related and unrelated to art, that data from NonFungible.com shows that the dollar value of sales expanded from \$24.5 million in 2019 to three times their size (\$82.5 million) in 2020, and then by over 200 times in 2021 year-on-year to \$17.7 billion. The number of NFTs sold rose from just over 1.6 million in 2019 to 27.4 million in 2021. The number of buyers and sellers active on these platforms also rose significantly, from under 45,000 buyers and 25,000 sellers in 2019 to 2.3 million buyers and 1.2 million sellers in 2021. NonFungible.com includes all qualified trades occurring on the Ethereum, Flow, and Ronin blockchains. More information on their data is given in the Appendix.

Figure 1.9 | Sales of Art and Collectibles NFTs 2019–2021



© Arts Economics (2022) with data from NonFungible.com

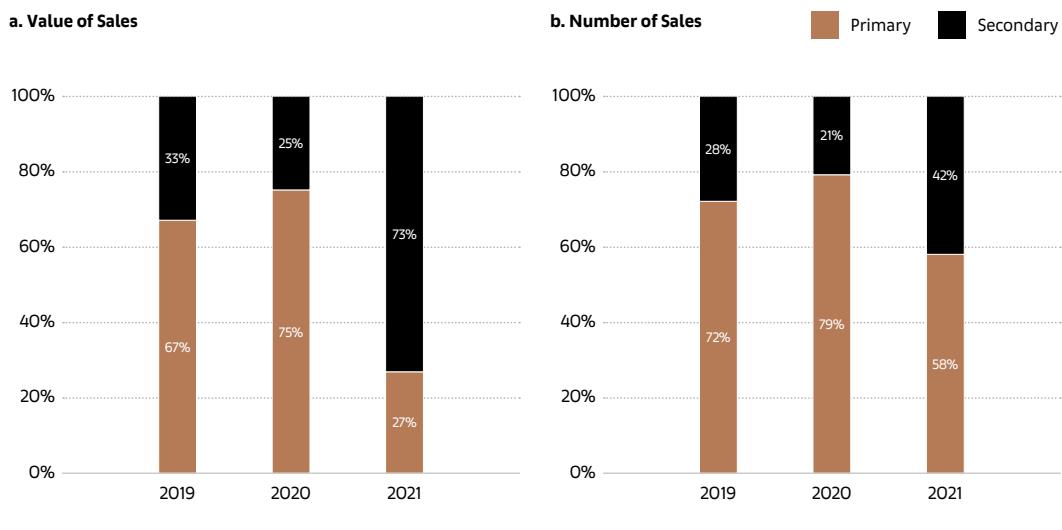
Supporting these transactions, there has been a huge expansion in the number of buyers purchasing art-based NFTs. In 2019, there were around 1,370 buyers active on these platforms (aggregating across primary and secondary trading) and 865 active sellers. By 2021, the number of buyers and sellers had expanded to:

- 130,696 buyers of art NFTs, including 64% who were active in primary sales, and 76% active in both primary and secondary trading; and
- 84,182 sellers of art NFTs, including 43% who were active in primary sales, and 86% active in both primary and secondary trading.

These figures are considerably higher again in the collectibles market, including 484,226 buyers of collectibles NFTs and 199,381 sellers.

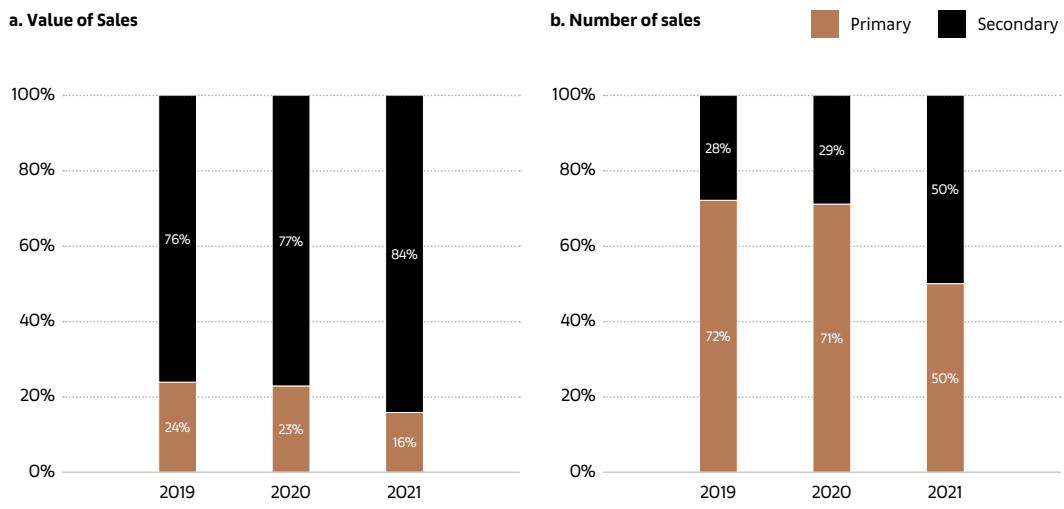
One of the reasons that buyers have expanded on these platforms is the attraction of rapidly rising prices. Average prices for art-related NFTs were \$200 for primary sales and \$265 for secondary resales in 2020. In 2021, these rose to \$1,462 and \$5,485 respectively. Collectibles, although averaging lower prices than art NFTs in 2021 (\$586 in primary sales and \$3,108 in resales) have seen an even greater increase year-on-year (from \$9 and \$72 respectively in 2020).

Sales of both art and collectibles NFTs have grown from \$4.6 million in 2019 to \$11.1 billion in 2021

Figure 1.10 | Share of Primary Versus Secondary Sales of Art NFTs 2019–2021

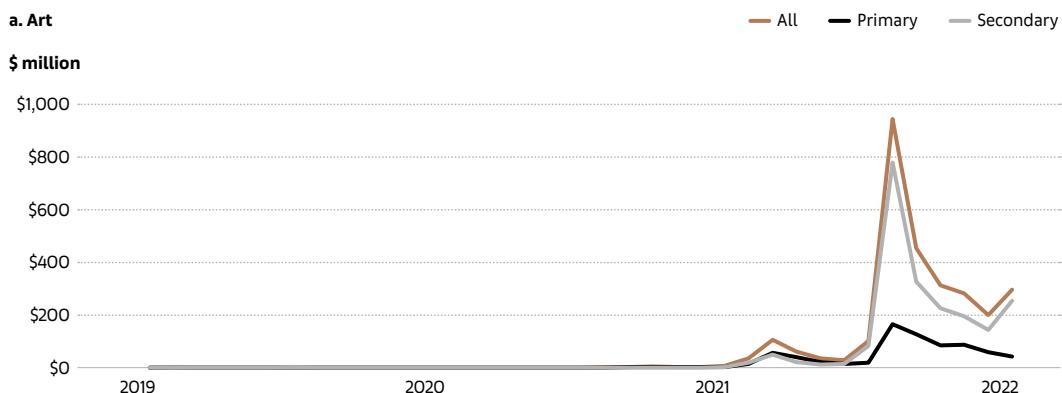
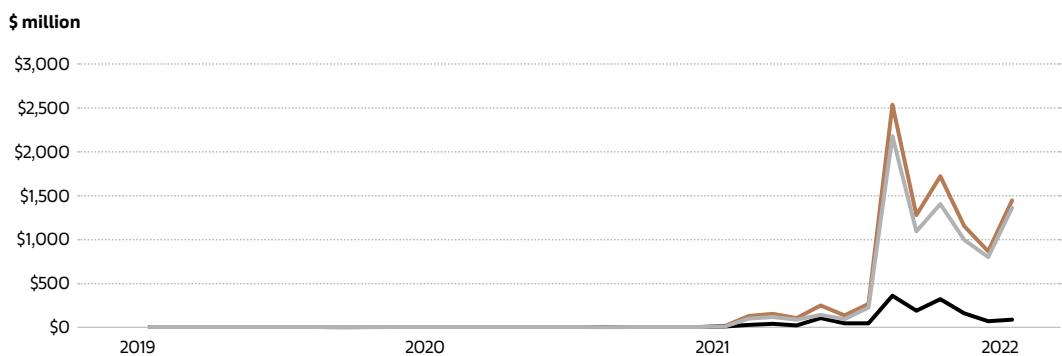
© Arts Economics (2022) with data from NonFungible.com

Accessible entry prices and rising resale values along with the instant tradability of NFTs via SMART contracts have helped to catalyze a booming resale market, with speculators trading in and out of NFTs at a much more rapid pace than would ever have been possible in the traditional secondary art market. In 2020, the bulk of art NFTs were related to primary sales, which accounted for 75% of total values and the majority of transactions (79%). However, in 2021, the context between these two sides of the market changed dramatically, with value concentrated on resales. Resales made up 73% of the value of trading in art-related NFTs in 2021, while primary sales fell to 27%. This is notably different from the collectibles segment where resales dominated by value from 2019 through 2021 with an average share of 79% of total values.

Figure 1.11 | Share of Primary versus Secondary Sales of Collectibles NFTs 2019–2021

© Arts Economics (2022) with data from NonFungible.com

Resales made up 73% of the value of trading in art-related NFTs in 2021, while primary sales fell to 27%

Figure 1.12 | Monthly Values Traded in Art and Collectibles NFTs 2019–2022**a. Art****b. Collectibles**

© Arts Economics (2022) with data from NonFungible.com

Figure 1.12 reports the monthly trading values of NFTs in the art and collectibles segments from 2019 to the beginning of 2022, showing the massive rise in sales during 2021, peaking in August. During this month, Tyler Hobbs' *Fidenza #313* was sold on OpenSea for 1,000 ETH (\$3.3 million at that time), having been sold on the primary market for just 0.17 ETH two months earlier in June, and with six unique owners to date. The collectibles market also peaked that month (at \$2.2 billion) and included two *CryptoPunks* sold for over \$4 million each. In both markets, it is clear that resales in the secondary market have driven the rise in values in 2021 and have accounted for the bulk of sales since mid-2021.

These highly liquid and continuously trading marketplaces have attracted very speculative buyers, primarily interested in buying and reselling in a short space of time for financial returns. The pseudonymous nature of transactions has also meant there are few barriers to entry for purchasing or sales unlike the traditional art market. The average time between purchase and resale in NFTs generally is just 48 days, however, for art NFTs this is even shorter at 33 days. In other words, on average, art NFTs are bought and resold within around one month (versus the average resale period on the art market of 25 to 30 years). According to the data from NonFungible.com, many of these resales have been profitable to date (82%) and total profits from resales (at just over \$1 billion in 2021) exceeded losses (\$65.8 million). However, questions have been raised about the sustainability of this trajectory, and its openness to risk should some catalytic event or change cause the bubble to burst. There are also questions about its effects on the longevity and value for artists' careers. (An artists' perspective on NFTs is given in Exhibit 3).

The average time between purchase and resale in NFTs generally is just 48 days, however, for art NFTs this is even shorter at 33 days

Aside from the purely speculative nature of many transactions, the unregulated nature of these platforms and high profitability has also encouraged dubious and illegal or semi-legal practices. NFT platforms are generally unregulated and allowed to operate freely, allowing transactions that would not be permitted in other financial markets. 'Wash trading' was highlighted as an issue in the market in 2021, with evidence of trading for escalating prices between accounts operated by the same owner to make an NFT appear more valuable and inflate market prices.¹¹ Although this practice is illegal in many jurisdictions, including the US, when it comes to conventional financial instruments, it has not been regulated or subject to any kind of enforcement order yet for NFTs and they remain an unregulated asset class. The focus on speculation and newness without vetting or other accreditation has also enabled less common but serious scams such as 'rug-pulls', where the creator of an artwork or project engages heavily in building its price and then suddenly sells, leading to substantial losses for investors.

¹¹ Chainanalysis, a cryptocurrency auditing company, reported data showing significant wash trading activity in the NFT market in 2021, with substantial profits made by a small number of wash traders. Their analysis found 262 users that had sold NFTs to self-funded addresses more than 25 times. Although many of these did not turn out to be profitable, the 110 profitable wash traders collectively made nearly \$9 million in profit versus \$416,984 in losses made by the 152 unprofitable traders.

Another very significant issue for artists and collectors that has been highlighted in 2021 in relation to NFTs has been the fraudulent replication and theft of artists' images and intellectual property. As NFT platforms operate on the decentralized, Web3 blockchain, sellers are not required to pass any 'know your customer' or other audits before they are allowed to make a sale as they would be on traditional internet platforms. On many NFT platforms, it is also free to mint new NFTs, and this can be done through a series of simple steps and without a limit on volume. Potentially, on many platforms, anyone (or a bot) can mint an NFT, creating a file and turning it into an NFT, even if they have no right to the content, and can put it up for sale without needing to show proof that they own the original image. While platforms are subject to copyright laws, including the 1996 *WIPO Copyright Treaty (WCT)* and the 1998 *Digital Millennium Copyright Act (DMCA)* in the US, these regulations require that the copyright owner or agent finds or is made aware of the infringement and then prepares and sends a takedown notice to the service provider requesting they remove the material that is infringing their copyright. Intellectual property infringements can be very difficult to discover and time-consuming to fight, and while some platforms have discussed limits and bans on known infringers, due to the relative anonymity permitted by these assets, it is possible for them to continue operating using a different wallet and pseudonym.

Due to the misuse of free minting of NFTs, one of the largest NFT platforms, OpenSea temporarily imposed limits on the number of NFTs that could be minted in 2021 (to five collections and 50 items per collection). However, due to negative feedback, it then removed the limits, but explained that its reasons for putting them on were that they had '...recently seen misuse of this feature increase exponentially. Over 80% of the items created with the tool were plagiarized works, fake collections, and spam...'¹² This statement in itself shows the very significant extent of this issue on large platforms.

In order to monitor and detect such infringements on behalf of artists and collectors, DeviantArt, one of the largest international content platforms for artists that has existed since 2000, launched DeviantArt Protect in 2021, a new image recognition software that scans public blockchains and third-party marketplaces for potential art infringements in the form of minted NFTs. (This expanded their existing image auditing which had focused only on infringements on their own platform of around 70 million registered users.) Since launching their software in September 2021 to the end of January 2022, they had sent 120,000 infringement alerts to their users. Their software scans

¹² Twitter feed from OpenSea (@opensea) January 27, 2022.

over five million NFTs per week, and infringement alerts have grown dramatically: from September to October, alerts grew by 30%, and by November to December the monthly growth rate was over 300%, showing the rapidly expanding nature of this activity. Further, their auditing research has also detected bots that are specifically programmed to scrape the internet, copying artists' work and automatically posting these copied works onto NFT platforms for sale, made possible by the ease of minting new NFTs without limits.¹³

The occurrence of these practices on NFT platforms creates serious issues for the long-term stability of this market, and the general loose regulatory oversight has created volatility and risk-aversion, undermining the confidence of many existing and potential users in the NFT ecosystem which will undoubtedly inhibit future growth. One major advantage in this marketplace is that the transparency of blockchain data makes it easy to discover these activities and identify their sources, meaning self-regulation, including banning users or applying penalties, could potentially moderate risks to some degree. It seems likely, however, that as the market grows in size and depth that it will come under the focus of government regulations and anti-fraud rules.

¹³ Information and data supplied with thanks to DeviantArt.

Exhibit 2: NFTs and the Art Market

Amy Whitaker, New York University, amywhitaker.net

The NFT phenomenon has overtaken public consciousness, both inside and outside of the art market, particularly since Beeple's *Everydays: The First 5000 Days* sold at Christie's New York for \$69.3 million in March 2021. However, the NFT has much longer roots, much greater sympathies to the history of art, and much more potential to enact seismic shifts in the art market than the spectacle of that sale might reveal.

A singular feature of NFTs as art is the way that they function as public goods – memes circulating on the internet that are non-excludable and non-rivalrous in consumption, that is, impossible to gatekeep enjoyment and possible to be viewed by many at the same time. But then the NFT or certificate takes this public-good nature (the lack of digital scarcity) and allows it to function as a singular and salable object. In this way, NFTs replace the aura of the original artwork with the aura of ownership.

What is an NFT?

Technically speaking, an NFT is an ERC-721 non-fungible token on the Ethereum blockchain, though the term has expanded to refer to unique digital identifiers that are registered on any blockchain. To unpack what that means, we need to go back a few steps. Ethereum is a type of blockchain protocol. A blockchain is a public, append-only bulletin board or an immutable, distributed ledger.¹⁴ The crux of blockchain is that it is a way of organizing information and being able to trust the information without trusting a central record-keeper, like receiving a bank statement with no bank or trusting an artwork's authenticity and provenance with no registrar or auction-house specialist. When we speak of blockchain and NFTs, we can talk about 'protocols', which are the types of blockchains (such as Bitcoin, Ethereum, Tezos, and Algorand), and 'platforms', which are the ways we interact with and purchase NFTs (for example, Hic et Nunc, SuperRare, Foundation, and OpenSea).

The Bitcoin blockchain protocol was launched by Satoshi Nakamoto, who circulated a white paper on Bitcoin in 2008 and then, in January 2009, launched the Bitcoin blockchain.¹⁵ The first record or 'genesis block' on the Bitcoin blockchain contained a *Times* of London headline about bank bailouts in the wake of the 2008 financial crisis. A blockchain registry can take any form of information – a movie, the complete works of Marcel Proust, a record of an artwork, a record of a photo of a cat

¹⁴ Joseph Bonneau, (2021). 'What Is a Blockchain?' MCA Denver Presents: Putting the Fun in Non-Fungible Tokens', Episode 1, available at mcadenver.org/event-series-nfts-fun.

¹⁵ Satoshi Nakamoto, (2008). 'Bitcoin: A Peer-to-Peer Electronic Cash System', available at bitcoin.org/bitcoin.pdf. Satoshi Nakamoto is believed to be a pseudonym for the author or group of authors of the paper.

on the internet – and standardize it into a fixed-length alpha-numeric code by using a cryptographic process called a one-way hash function. A hash function's key feature is that it is almost impossible to reverse. Thus, if one submitted the entire works of Marcel Proust to a blockchain and then changed one word in the document, the one-way hash function would no longer hold, and someone would be able to see that the record had been altered.

Blockchains also chain a group of those records together in a block, so that, by domino effect, it would only be possible to falsify one record by changing the functions of all of the records after it. This kind of chain-link fence approach takes a single act of cryptographic security and adds to it a strength in numbers – of the interconnected records and of the many witnesses to the distributed ledger.

Although blockchains are commonly associated with money (in this case non-fiat or not state-issued money called cryptocurrency), the starting point of blockchains is actually a concern for knowledge. In the late 1980s, the research scientists Stuart Haber and Scott Stornetta were concerned about how easy it was to manipulate a digital file and therefore how we would know what was true about the past. In 1991, they published a paper on how to time-stamp a digital document.¹⁶ Their system tried to ensure the sanctity of knowledge without having to trust a central keeper of the record. What Nakamoto added, was an incentive structure for a broad network of people to maintain the distributed ledger. That incentive was winning Bitcoin (and later other cryptocurrencies) for solving cryptographic puzzles requiring brute computing strength.

In 2015, Bitcoin was joined by another blockchain protocol, Ethereum, launched by Vitalik Buterin who was interested in blockchain's possibilities not so much as a financial instrument but a governance system. First conceiving of Ethereum in 2013, Buterin developed a new protocol that was more modular and easy to program, using a systems of packets or 'tokens'. The primary token was called an ERC-20 or a 'fungible' token.¹⁷ Fungible tokens are interchangeable in the way that dollar bills are. Non-fungible tokens – the ERC-721 tokens that were first launched experimentally in 2017 and codified as an Ethereum programming standard in early 2018 – are unique in the way that traditional artworks are, although they can also exist as part of larger collections of works, in a similar way to Andy Warhol's *Flowers* or their NFT counterparts such as Larva Labs' *CryptoPunks* or Yuga Labs' *Bored Ape Yacht Club*.

¹⁶ Stuart Haber and W. Scott Stornetta, (1991). 'How to Timestamp a Digital Document,' *Journal of Cryptology*, 3, 99-111, available at link.springer.com/article/10.1007/BF00196791

¹⁷ ERC is the name for Ethereum Request for Comments, a shorthand for a programming proposal, overseen by the community of Ethereum.

A key distinction across blockchain protocols is the mechanism they use to verify the ledger. Bitcoin and Ethereum were built on Proof of Work (PoW), the solving of cryptographic puzzles using brute-force computing power. Newer blockchains, including Algorand and Tezos, use a Proof of Stake (PoS) method instead, in which users must put up a 'stake' - usually defined by cryptocurrency. Those with a higher stake have a greater probability of being selected, thus favoring those who already have cryptocurrency. On certain protocols, one may also risk losing that staked money if one behaves in a fraudulent manner. Proof of Work is a key source of environmental criticisms of blockchain because the energy required to solve those puzzles goes up exponentially. By the estimates of the Cambridge Bitcoin Electricity Consumption Index, currently Bitcoin alone consumes approximately 0.55% of the world's electricity production at 124 Terawatt Hours per year, which is comparable to the energy consumption of Norway or Ukraine.¹⁸ While Proof of Stake systems dramatically lower this energy footprint, they have been criticized for favoring those who already hold currency, thus creating an inequitable barrier to participation.

The Development of NFTs in the Arts

The development of NFTs in the arts dates to the first NFT in 2014, early experimental collectibles such as *Rare Pepes* and platforms such as DADA, and the twin launches of *CryptoKitties* and *CryptoPunks* in 2017.

In 2014, the artist Kevin McCoy was invited to collaborate with the technologist Anil Dash for the event Seven on Seven, in which Rhizome, an affiliate of the New Museum for Contemporary Art in New York, pairs artists and technologists to create commissioned works. Dash and McCoy planned to unveil a system of registration for digital art, under the name Monegraph, at the event's demo day. As part of their preparation, McCoy demonstrated how to register an otherwise infinitely replicable digital artwork to a blockchain as a unique object. The sample work *Quantum* (2014) is considered the first ever NFT. The works were registered to Namecoin, an offshoot of the Bitcoin blockchain that could accommodate unique listings, as would be done for a unique 'name' of a URL or website identifier.

In November 2017, the Canadian company Axiom Zen (which later spun out Dapper Labs) launched a digital game of collectible cats, *CryptoKitties*, that could be bred to create new cats, each given a unique identifier recorded on the Ethereum blockchain. This work followed from the launch

¹⁸ Estimates from the Cambridge Bitcoin Electricity Consumption Index, available at ccaf.io/cbeci/index/comparisons.

in June 2017 of the *CryptoPunks*, a set of 10,000 pixelated characters created by Matt Hall and John Watkinson, the founders of Larva Labs. The *CryptoPunks* were given away for free, apart from collectors needing to pay the then relatively nominal Ethereum gas fees. The subsequent launch of *CryptoKitties* crashed the Ethereum network. Dapper Labs then formally proposed the ERC-721 programming standard for NFTs to the Ethereum consortium, and it was approved in January 2018.

While the *CryptoKitties* and other collectibles have straddled the fine art and gaming categories, other digital art initiatives were founded before the ERC-721. In 2014, Judy Mam and Beatriz Ramos co-founded DADA, a collaborative drawing platform. Artists all over the world would engage in visual conversations making linked artworks. In 2017, Mam and Ramos curated a collection of these early works entitled *Creeps and Weirdos*, which were registered as ERC-20 fungible tokens in 2017 and then reminted as ERC-721 tokens in 2019. Artists had also been experimenting in early financialization of their own work. In 2015, the artist Sarah Meyohas created *Bitchcoin*, a currency corresponding to a 5x5 square inch section of one of her photographs, such that the tokens could be collected as is or 25 tokens could be redeemed for a full artwork.

Art Market Interest

Although there was earlier interest in NFTs in the art market from around 2018, they did not make a splash into the broader public until the March 2021 sale of Beeple's *Everydays*. The sale set a record as the third-highest auction price achieved by a living artist, and sales of NFTs have continued apace. As noted in the report, according to the data from NonFungible.com, almost \$18 billion in NFTs took place in 2021, including \$2.6 billion related to 'art' (as defined by NonFungible.com). However, many of these sales are very low value and being traded and resold by a limited number of people. According to Nadini et al. in their paper in *Nature: Scientific Reports*, between June 23, 2017, and April 27, 2021, there were 6.1 million trades of 4.7 million NFTs, not including sales by auction houses. For art NFTs, only 1% of them sold for more than \$1,594, and the top 10% of traders accounted for 85% of transactions.¹⁹

Skepticism and Criticisms of NFTs

While many general skepticisms exist about the value of NFTs and the particularities of their circulation in the arts, one of the most persistent criticisms of blockchain, and by extension NFTs, is the environmental impact. As above, blockchains that use Proof of Work consume an enormous

¹⁹ See Nadini, M., Alessandretti, L., Di Giacinto, F. (2021). 'Mapping the NFT Revolution: Market Trends, Trade Networks, and Visual Features', *Scientific Reports*, 11(1), 20902.

amount of computing power, while NFTs are singularly criticized within larger, systemic issues of climate crisis.

Although NFTs are often conceived of as a whole new class of art (or, at least for a period, labeled by Wikipedia editors as not art), these digital objects share a common feature with traditional works of art with regard to difficulty with valuations. Both artworks and NFTs do not have cash flows and thus cannot be modeled easily with discounted cash flows. NFTs are also difficult to appraise. For instance, in July 2021, NFT collector and museum trustee Eduardo Burillo tried to donate *CryptoPunk #5293* to the ICA Miami. However, the museum was not initially able to accept the donation owing to the difficulty of appraising the work. The donor needed an IRS valuation for the charitable donation and the museum was not allowed to accept donations of uninsured works. Burillo's art advisor, Caroline Taylor of Appraisal Bureau, announced she is developing a proprietary NFT valuation platform that Lloyds of London and other insurers have generally accepted. Not only does the lack of appraisal standards for NFTs complicate tax and insurance purposes, but also the sky-high prices raise concerns over the reliability of comparables traditionally used by appraisers to corroborate the value of artworks.²⁰

Appraisers and conservators of time-based media art may find evolving roles in relation to art markets because high levels of technological understanding can be necessary to verify the authenticity and provenance of NFTs, especially where there have been complicated movements of artworks across different blockchains. For instance, when Kevin McCoy's 2014 work *Quantum* was sold at Sotheby's in June 2021, the work had to be ported over from the Namecoin blockchain by reminting it on Ethereum. A troll tried to lay claim to the defunct listing on Namecoin and then repopulate the registration with new metadata. The artist was put in the position of verifying the authenticity of his own work, simultaneously occupying the locus of vulnerability and of expertise. Over time, conservators and appraisers may be asked to take on this role, akin to ratings agencies in financial markets. Counterintuitively, immutable records can require a more ongoing, organic maintenance and a deep understanding of the technologies themselves.

New questions of collection management arise, in particular the security of NFTs and their safekeeping via systems such as IPFS (Interplanetary File System) and NFT management start-ups such as Artnome's Club NFT. Blockchain records are also being developed to track physical artworks. Artory, which listed the 2018 Ebsworth Collection sale at Christie's New York to the Ethereum blockchain,

²⁰ Information from interview with curator and appraiser Muriel Quancard in 2021.

is now creating NFTs for physical artworks using the Algorand blockchain. Other companies, such as StartBahn, have developed systems of artwork tagging and registration for both artists and collectors.

At the same time, exhibition and display practices for NFTs are still developing. Pablo Rodriguez-Fraile founded the cultural institution Aorist after hosting exhibitions in Decentraland. NFTs have made inroads to major art fairs, with NFTs displayed at ARCO Madrid in July 2021, followed by the Crypto Kiosk at Nagel Draxler at Art Basel in September, the surfing project at Artissima in October, and the Tezos NFT installation in December at Art Basel Miami, in part transforming the white cube into the black box.

Future Directions

While NFTs may seem new, their trajectory follows a longer arc from earlier attempts of art markets to create tradable forms around ephemeral art. Sol LeWitt's certificates of authenticity that accompany Wall Drawings mirror the relationship of NFTs as readily accessible images for which only one person or entity (the certificate holder) can claim ownership. Yet because of the lack of singularity of digital works or their existence in infinitely many identical copies, NFTs can transform the ecosystem of digital images, establishing this aura of ownership and, in turn, digital provenance of artworks.

As we watch the NFT landscape unfurl, we can see new experiments in resale royalties for artists via NFT platforms such as SuperRare. This automation of resale royalties – as either bypassing or double-counting collections agencies – calls for renewed consideration of legislative oversight of the Artist's Resale Right. This royalty especially serves artists in a market with frequent trading, speculation, and escalating prices without settled and agreed valuation for works. Artists may gain new avenues of financial support from these automated royalties, and new forms of power initiating artworks into the marketplace and broader arts ecosystem.

NFTs also present potentially consequential changes to the art market itself. New artworks are entering the marketplace without vetting by traditional critics or curators, and typically sold directly by artists to collectors via NFT platforms. In NFT sales at auction houses, some record sales are driven by new buyers. When Beeple's *Everydays* sold at Christie's, 91% of bidders were new to the auction house.²¹ And while there are calls to democratize the art market via NFTs – and determined cries against the art establishment for enforcement of a taste-making apparatus –

²¹ Eileen Kinsella, (2021, March 11) 'An NFT Artwork by Beeple Just Sold for an Unbelievable \$69 Million at Christie's—Making Him the Third Most Expensive Living Artist at Auction,' *Artnet News*, available at news.artnet.com/market/christies-nft-beeple-69-million-1951036.

in many regards it remains radical to interact with NFTs as art, in the way that the science fiction writer Bruce Sterling did in his close looking at all of the works in the first exhibition of the NFT platform Feral File.²²

Underneath the glittery spectacle of marquee auction prices is the potential for large-scale shifts, not only in the curatorial systems of vetting artworks and in the role of time-based media art conservators, but also in the fledging yet sturdy efforts of artists to create economic sustainability that may, over a long arc, be assembled piece by piece to become the cathedral businesses of our time. As the artist Kevin McCoy has said, we have just completed a 30-year arc of digitization and are entering a 30-year arc of tokenization. Opinions on this arc range from revolutionary transformation of the arts and the larger democratic project to tulip craze redux. As we travel from hype to hyperreality, and watch artists and others reimagine ownership, economic sustainability, and creative work using NFTs, the same fundamentals are there of how we know what was true about the past and how we continue to understand the present and imagine the rapidly evolving future. As Robert Storr once wrote of Bruce Nauman's art:

*'The essential questions...are constant insofar as they concern eternal tensions between life and death, love and hatred, verifiable truth and gnawing existential doubt, yet to retain their resonance and urgency they are at the same time constantly in need of concise and exacting restatement.'*²³

If anything, NFTs – even with their spectacle of seemingly rootless origins – invite us into those questions of value, knowledge, and art.

²² Bruce Sterling, (2021, April 8). 'Social Codes at Feral File,' *Medium*, available at bruces.medium.com/social-codes-at-feralfile-399840a43757. See also: feralfile.com/exhibitions.

²³ Robert Storr, (1997). *On the Edge: Contemporary Art from the Werner and Elaine Dannheisser Collection*. New York: The Museum of Modern Art and Harry N. Abrams. See assets.moma.org/documents/moma_catalogue_265_300065175.pdf

Exhibit 3: NFTs: An Artist's Perspective

Simon Denny, Artist, simondenny.net

How Artists Are Using NFTs and Blockchain

NFTs and crypto art have exploded in 2020 and 2021 as a new context with a significant market for artists to use. This new array of formats has matured into a dynamic space for artists to participate (and adapt to) with qualities that include the ability to trade assets anywhere, often and at a high volume; the privileging of memetic qualities of both images and narratives; and the challenge to creatively and efficiently program for new technical and network constraints, including tight blockchain storage possibilities.

Sales and circulation tendencies in these dynamic zones have spurred ad hoc community formation both as project discussion forums (on platforms like Twitter and Discord) and as new kinds of quasi-institutional collecting and canon-building conglomerates (in the form of DAOs). This environment has prompted a wide range of actors from both the legacy artworld and 'creators' who come from other contexts like digital marketing, illustration, platform design, music, law, and decentralized finance to produce huge range of innovative and sometimes very profitable artistic projects, forming new hierarchies of attention, stand-out figures, and different metrics for success. Projects like Loot, by Dom Hofmann (the former founder of the video platform Vine, which launched with a minimal, elegantly coded series of textual prompts but spawned a vast series of artistic collections beyond its original creator which is in and of itself thousands of assets and millions of dollars in value deep), sit alongside huge valuations of almost 'vintage' (2017/2018) profile picture (PFP) collections like *CryptoPunks*, and newly prominent artworld figures (often coming from 'media art' or 'net art' communities) with increased levels of support and visibility like Reah Myers, Mitchell Chan, Kevin Abosch, and others.

Common formats range from single digital assets sold as single unique works (one-of-ones), perhaps most visibly in practices like Beeple, sold at both auction houses like Christie's and Sotheby's, and on prominent platforms like Foundation, Rarible, SuperRare, Nifty Gateway, and a proliferating set of more recently founded alternatives, and more numerous series of 'generative' artworks, which often launch from a custom website when first 'minted' and are then traded on secondary market platforms like OpenSea or Zora. Artists like Harm van den Dorpel, also a founder of an

early gallery for crypto art called left.gallery, collaborate with other platforms like the more independent, boutique-style folia.app. These platforms feature projects like his *Mutant Garden* that skillfully play with the constraints and expectations of the ERC-721 medium (an Ethereum blockchain standard NFT format), with assets that generate their imagery directly from code that morphs and changes – thus changing the asset's visual appearance and playing with the expectations of the medium to be one of digital permanence. With projects like these by Van den Dorpel, and others such as Loot, it is hard to imagine either a market or network environment which would have supported and valued these kinds of projects in past iterations even of net.art, let alone museums, galleries, biennales, and art fair forums – providing a genuinely new context that has expanded both artists' opportunities to make new kinds of art, but also for other kinds of artwork to be valued in different ways by existing and new communities of art-interested people.

NFTs and Disintermediation

The narrative around the disintermediation of sales and distribution of art with NFTs is potentially overstated. Yes, there are ways that artists can present and sell works with different kinds of gatekeeping mechanisms than the world of established galleries, dealers, and advisors. However, that does not mean that there are not similar figures playing these roles on NFT platforms. The possibility of onboarding to prominent one-of-one auction platforms like SuperRare or Foundation are selected by mysterious mechanisms, teams, or individuals within the platforms, with the possibility for those who are well-connected to use the usual nepotistic ways around them. Also, when an artist has onboarded to such platforms (or listed or minted using open platforms like OpenSea), a successful project or artist still needs to attract attention from the kind of buyer interested in collecting or trading NFTs, which often involves extensive work inserting themselves into online discussions or groups on Twitter, telegram, WhatsApp, or Discord or aligning their interests with those who have. Specialized discourses, networks, and arenas have quickly emerged and it is much more challenging to find success or any degree of visibility without the explicit support, or at least an understanding of where these discourses sit so that the output being produced matches the expectations of the communities that move markets. Context is still as important in the emergent NFT market as it is in other artworlds, and elite groups have formed fast and hazing rituals, and specialized community rituals and terminology already exist.

Also, NFT platforms do take a cut of sales, although it tends to be in the order of under 20% of sales rather than 50% like many galleries. So, fees are still paid by artists for access to markets even on the most open platforms. The artist also pays ‘gas’ on Ethereum, or equivalent network transaction fees if they do the minting themselves. (Although, there are also clever ways to set up minting costs as part of the initial sales prices if an artist sets up contracts that mint from websites and port to a secondary platform like OpenSea after the initial mint is covered by the buyer). While art fairs and exhibitions do seem much less relevant or important to the core business of sales and distribution of NFTs, moments like those happening at specialized events like NFT NYC in November, or those running in parallel to Art Basel Miami Beach, clearly are becoming more important places of gathering and exchange.

Infrastructure for curating and exhibiting NFTs online, from various virtual galleries and other crypto-acquired properties like those on Decentraland, including some built by auction houses and commercial galleries, are expanding alongside new curatorial protocols like jpg.space and NFT-specific criticism publications like Outland.art founded by Brian Droitcour, formerly of Art in America. So far, only a handful of established galleries such as Pace, König, and Nagel Draxler have shown any interest or attempt at foregrounding or launching serious NFT collections, which may change in the coming year. How effective or how much of a competition for the more visible and commercially dominant platforms and auction houses these may become is yet to be seen, but what is clear is that potentially a very different set of skills, networks, and infrastructure is needed at this stage than most galleries have in-house to promote and sell NFT projects for the communities they currently thrive in, or NFT curious legacy collectors.

Regulation is also likely to affect everybody in all sorts of ways yet to be measurable – especially as jurisdictions grapple with tax norms in different ways and with different levels of transparency and user-friendliness. Artists are largely having to navigate these challenges themselves, again reflecting the changing roles of intermediaries. While galleries might have helped artists set up this kind of infrastructure in the past, now most are unlikely to have clear ideas on how to manage these issues, leaving artists to often seek the few accounting minds in their networks that have any idea of how to book these kinds of new currencies and tokens.

Short-term interest or flipping in buying and selling of hot works or series is not entirely new to art, with NFTs, however, it is certainly catered to in the way many successful projects and collections

are designed by artists. Again, it could be argued that this speculative behavior is part of the medium, and a challenge which innovative artists are using to make reflexive and creative artworks that encourage or resist these tendencies that are so relevant in other parts of life and markets way beyond crypto and art. Resale royalties, being somewhat standard of course, hugely effect artists' attitudes to this. Fast resales and increasing prices which have significant kick-back for their creators is a very different proposition than a secondary market that artists can barely participate in, like those in the existing art market. Projects are often designed with this in mind, with prices for initial mints low and then increasing rapidly in secondary markets. An ideal project's performance can involve a large amount of initial sales of cheap artworks to a broad selection of collectors (in the hundreds or thousands of individual wallets), a significant portion of which will be resold fast, ideally at a large mark-up, which incentivizes both the initial support of the project and the spread of successful ones to a large number of invested parties – both financially and with their time and attention.

What effect this kind of sales pattern has on long-term value for artists is unclear. At this stage, it feels like a successful initial launch and primary sale of work is not necessarily an indication of longer-term value, and there are many examples of projects that sell out very quickly and are a week or month later being resold or listed below the primary sales price. However, it is one relevant data point. There are other projects that launch without much fanfare or success that are revisited later and then gain a lot of value. Examples of these include terraO's 2018 *Flowertokens* project, or Mitchell F Chan's 2017 *Digital Zones of Immaterial Pictorial Sensibility* – both quiet and small at launch, but have become both critical and commercial success stories years later that have held their high regard for a comparatively long period. There are some parallels to the 'zombie formalism' reception given to a number of recent painters who, when the work was initially presented, were sold and resold quickly for rising prices. Some of those artists have held their value broadly, even established artists such as Oscar Murillo, despite much of the discourse at the beginning of his visibility being centered on price and linked to other practices that are much less visible and valuable now. It could be argued that an early high valuation in this case facilitated some of Murillo's long-term success. It seems most likely that the volume of sales and prices at the beginning was then affirmed by other kinds of broader support along the way – which was not true with other practices that behaved similarly at the time he gained recognition – but that might not have been visible at all without a short-term focus on a particular type of work at a particular moment.

Dealers

2



Key Findings

Dealers

- 1.** After a decline of 20% in 2020, aggregate sales in the dealer sector reached an estimated \$34.7 billion in 2021, increasing by 18% year-on-year, but still below the level of 2019.
- 2.** Some of the larger dealers, who experienced the greatest decline in sales in 2020, saw the most improvement, driven by ample demand from HNW collectors for highly priced works of art. The highest rise in values year-on-year was in the segment of dealers with sales of between \$5 million and \$10 million (35%), while the smallest gains were experienced by dealers with turnover of less than \$250,000, with values up by just 6%.
- 3.** As sales picked up and dealers remained cost conscious, there was a significant rise in the share of businesses making more profit in 2021. Across all dealers, 55% were more profitable than in 2020, 21% were stable, and 24% were less profitable.
- 4.** Just 6% of the dealers surveyed had sold NFTs in 2021. A further 19% had not sold NFTs but were interested in doing so in the next one to two years, while just under half (46%) reported that they had not done so and had no interest in doing so in future. The remaining 29% were unsure whether they would sell NFTs in future or not.
- 5.** There was evidence of continuing pressure on expanding client bases, with the average number of individual buyers being sold to declining to 50 in 2021 from 55 the previous year and 64 in 2019.

Dealers

- 6.** In 2021, as the art fair calendar resumed, even with a reduced number of events and limited capacity, fair sales advanced to 29% of total dealer sales (including OVRs), up by 7% year-on-year, but still nowhere close to the 43% reported in 2019.
- 7.** The corollary of the return of gallery exhibitions and fairs was that online sales by dealers lost share, falling from 30% in 2020 to 20% in 2021 but again, still well above the level of 2019 (12%).
- 8.** As fairs and in-person exhibitions offered opportunities for sales, dealers at the highest end with sales of over \$10 million saw the biggest revision in their share of online sales. Including art fair OVRs, online sales fell from 47% in 2020 to 22% in 2021, although they remained still more than double their share in 2019 (9%).

2.1 | Dealers Surveyed in 2021

The dealer sector has gone through a challenging and transformative period over the last two years, as the COVID-19 pandemic created new demands and changed the operating contexts for many galleries and dealers. The pandemic brought about some immediate and significant changes in working practices, kick-started by this crisis, but with some showing signs in 2021 that they would be more lasting. Although new developments were part of longer-term shifts already well underway, the last two years have also provided an opportunity for restructuring and innovation as dealers were forced to review their business models to adapt to new economic realities. In 2020, most were focused on significantly intensifying digital strategies in order to maintain sales and communications as well as cutting costs and maintaining profitability. In 2021, as some live exhibitions and events returned in a limited capacity, dealers were faced with the challenge of balancing old and new methods and merging offline and online strategies.

After a decline of 20% in 2020, aggregate sales in the dealer sector reached an estimated \$34.7 billion in 2021, increasing by 18% year-on-year, but still below the level of 2019

After a decline of 20% in 2020, aggregate sales in the dealer sector reached an estimated \$34.7 billion in 2021, increasing by 18% year-on-year, but still below the level of 2019. The effects of the crisis on sales over the last two years have not been evenly distributed. While most segments and regions improved in 2021, some of the old hierarchical features of the market began to resurface, with dealers at the higher end bouncing back more strongly than some smaller businesses, after having suffered the greatest decline the previous year. There were also differences between sectors, with the contemporary market performing markedly better than some older sectors of fine art and the decorative art and antiques markets.

This chapter focuses on the dealer and gallery market, consisting of businesses trading in fine art, decorative art, antiques, and antiquities. Due to the private nature of dealer sales and limited

publicly available data on turnover and other aspects of their businesses, surveys continue to be the primary source of information. Arts Economics conducted two surveys of the sector in 2021. The first survey in July (with 701 responses) concentrating largely on employment and the role of dealers and a second in December focusing on sales and strategies (with 774 responses).²⁴

The dealers surveyed were from around 50 different regional or national markets. The highest share came from Europe (55%), and within Europe, 21% from the UK and 20% each from France and Germany. Dealers from North America accounted for 18% of the survey's respondents, while 14% were from Asia, and 8% from South and Central America.

Most dealers (95%) reported that they currently operated from one physical premises or gallery, with 5% operating in multiple markets (including 3% in two regions and 2% in three or more).

The survey covered all sectors of the art and antiques market, although respondents were predominantly fine art dealers (89%), with 11% operating in decorative art, antiques, and antiquities. Around 70% of the sample dealt in contemporary art, either alone (53%) or with another sector such as Modern art.

Globally, the dealer sector is made up of over 290,000 businesses covering both the primary and secondary markets for art and antiques. Most of these are small businesses, both in terms of headcount and sales turnover. The survey sample was drawn from dealers that are either members of dealer and gallery associations or who participate in art fairs, meaning that they are, for the most part, more established businesses. Due to the criteria required to get into a fair or association, the sample excludes very many small businesses and sole traders, and hence a large volume of lower value sales, which are estimated conservatively to arrive at the industry-wide total.

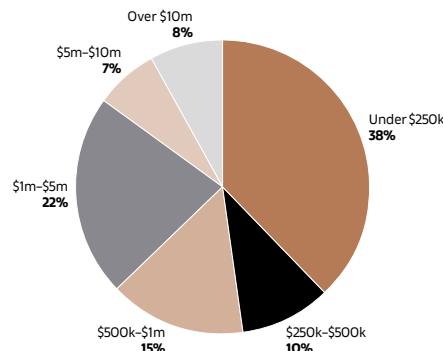
Some of the old hierarchical features of the market began to resurface in 2021, with dealers at the higher end bouncing back more strongly

²⁴ These surveys have been carried out by Arts Economics on the dealer sector consecutively for over 15 years, providing a means for tracking and analyzing trends in the sector over time. Interviews were also conducted with dealers in different sectors and regions in 2021 to provide deeper insights into some key issues uncovered in the surveys. More information on the dealer survey and sources is given in the Appendix.

However, even within this sample, respondents varied with regard to the size of their annual sales turnover: 63% had annual sales of less than \$1 million and just 8% reported sales in excess of \$10 million (up from 6% in the global dealer survey conducted in 2020). Given the sampling process,²⁵ most dealers were well established and the average period in business was 23 years, with 42% in business longer than 20 years, significantly higher than many other industry averages.²⁶

The survey was carried out in December 2021 at which point, 8% of the dealers responding did not currently operate out of a physical gallery or premises, up from 5% when the survey was run in December 2020, showing a slight increase in the number of dealers choosing to use different business structures for their operations. There has been some increasing diversity in the business models within the sector in recent years as dealers have attempted to adapt to changes in the context of their sales, particularly the higher share of sales online and at fairs, as well as rising rents and other costs. Although research carried out in 2021 showed that the more traditional gallery model, where a dealer works from a premises with an exhibition space, is still by far the most common, dealers noted anecdotally that they are increasingly experimenting with different models, including both online options, alternative spaces, less permanent structures, and shared ventures on- and offline in order to try to increase visibility and manage costs.²⁷

Figure 2.1 | Annual Sales Turnover of Survey Respondents in 2021

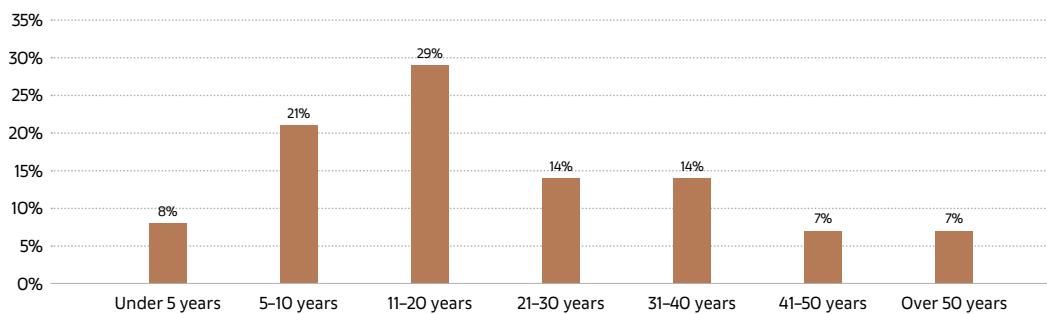


© Arts Economics (2022)

²⁵ The survey was distributed by various national dealer associations, including CINOA, the ADAA, SLAD, CPGA and others, as well as to Art Basel exhibitors. These associations and art fairs have vetting and entry criteria and it is therefore more likely that the dealers surveyed had been open and established for at least one or more years.

²⁶ Data from the Bureau of Labor Statistics in the US for example showed that in 2021, 26% of the currently operating private sector enterprises had been in business for longer than 20 years.

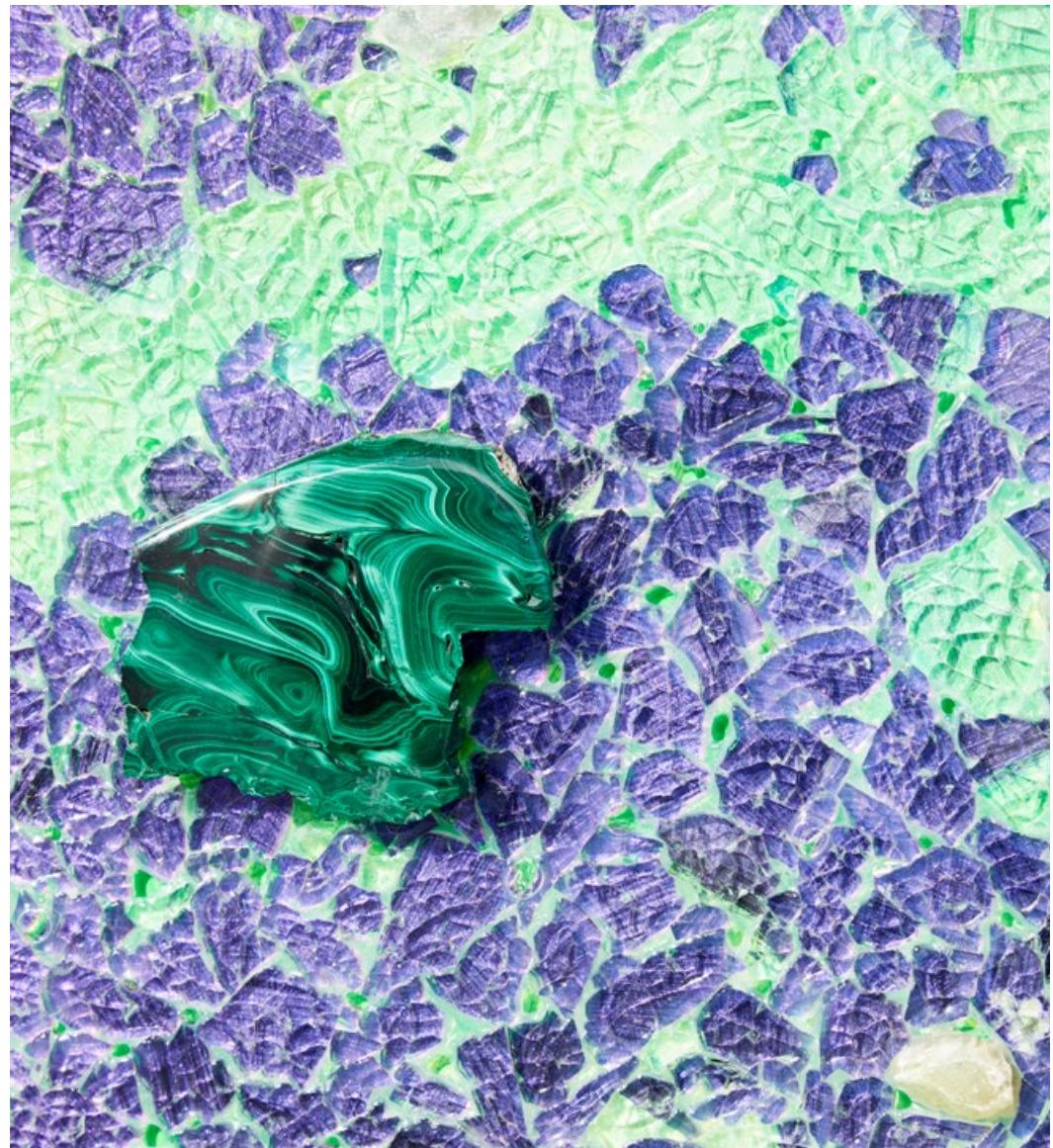
²⁷ See Arts Economics (2021). 'Resilience in the Dealer Sector, A Mid-Year Review 2021, Art Basel and UBS, available at artbasel.com/about/initiatives/the-art-market.

Figure 2.2 | Dealers' Number of Years in Business in 2021**% of dealers**

© Arts Economics (2022)

Of those that had a premises or gallery, 97% were open for business, up 10% on the same time in 2020. The majority (60%) of those businesses that were open were running normally or in the same manner as they had in previous years, up from just one third of open businesses in December 2020. However, 40% were open but still operating under restrictions, new conditions, or safety measures implemented for visitors and staff due to COVID-19 (down from 67% in December 2020).

**40% of businesses were still operating
under restrictions, new conditions,
or safety measures implemented for visitors
and staff due to COVID-19**



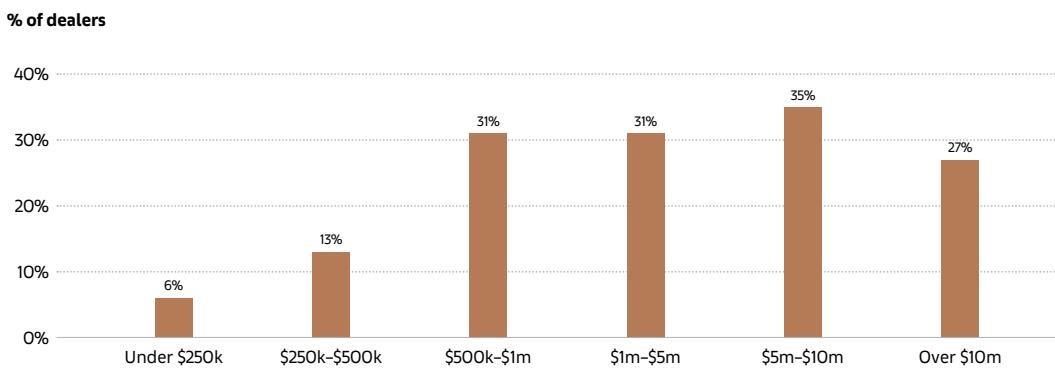
2.2 | Dealer Sales

Sales in the dealer sector were resilient in the face of continuing challenges in 2021, with the aggregate advance of 18%, regaining much of the ground they had lost during 2020. After a stable year in 2019, sales came under significant pressure in 2020, with dealers being particularly vulnerable to the impact of the COVID-19 crisis, especially with regard to their dependency on travel and in-person exhibitions and contact. By the end of 2020, across all sectors, the dealers surveyed reported an average year-on-year decline of 23%. In 2021, the shifts made to selling more online helped many businesses, while the return of exhibitions and fairs, even in a limited capacity, allowed some to expand sales further as collectors welcomed the opportunities to engage with dealers and artists in person again. While many dealers reported that they have had a significantly better year than in 2020, aggregate sales in 2021 were still 6% below the level achieved in 2019.

Across all dealers surveyed in 2021, a majority of 61% reported an increase in sales values year-on-year from 2020, 13% were stable, and 26% experienced a decline. Comparing their sales to 2019, less than half (48%) saw an improvement in values.

There were hopes in 2020 that the movement online might create a wider market and a more level playing field for galleries and dealers, and some smaller galleries fared better (or their sales decreased less) than their larger peers. However, this trend did not continue in 2021 and the more familiar hierarchies returned, with the positive aggregate growth driven mostly by the strength of sales at the higher end of the market.

A majority of 61% of dealers reported an increase in sales values year-on-year from 2020, 13% were stable, and 26% experienced a decline

Figure 2.3 | Average Change in Sales Values by Dealer Turnover Segment 2020–2021

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To analyze how dealers fared within different segments, Figure 2.3 shows the average change in sales reported by businesses in 2021 in each segment. This reveals that some of the larger dealers, who experienced the greatest average decline in sales in 2020, saw the most improvement from that low point, driven particularly by ample demand from collectors for highly priced works of art, with increases in HNW wealth encouraging spending.

The highest rise in values year-on-year was in the segment of dealers with sales between \$5 million and \$10 million (35%), a substantial recovery from the fall of close to 30% reported in 2020. The smallest gains, on the other hand, were experienced by dealers with turnover of less than \$250,000, with values up by just 6%, and only half of these businesses reporting increases (with 36% declining and 14% stable on 2020). Within this segment, those most under pressure were businesses with turnovers of less than \$100,000, who reported an aggregate decline in sales in 2021 of 8%.

Mid-sized dealers with turnover in the \$250,000 to \$500,000 million range reported an increase in sales of 13%, after a fall of 26% in 2020. This rise was substantially less than some of their larger peers and 30% of dealers in this segment reported declining sales, with only 10% stable on 2020.

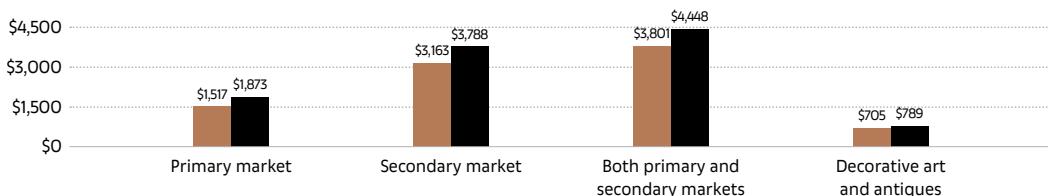
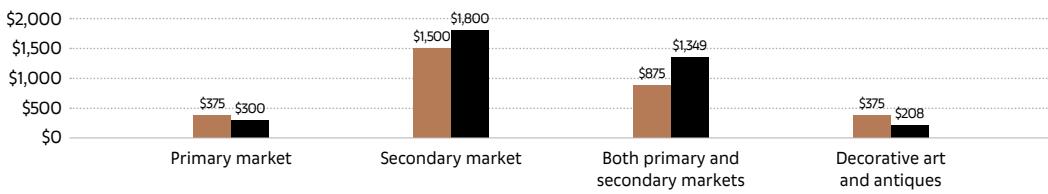
At the highest end (dealers turning over \$10 million or more), only 15% of respondents noted that their performance did not improve on 2020, and sales on aggregate rose by 27%, a significant advance after reporting one of the biggest declines of 31% in 2020.

While sales grew in many areas, there were still some notable differences between regions. Dealers in Asia had among the most substantial increases in sales, with an aggregate rise of 31%. Some of the strongest advances in the region were reported in Japan, Hong Kong SAR (China), and Singapore and a more moderate 12% increase in Mainland China. Dealers in South America reported a 29% increase, with strong sales in Brazil and Mexico, but declines in Argentina and Chile. In Europe, dealers posted gains of 10%, which included a rise of 19% in the EU (including 29% in France), 7% in Switzerland, and a more moderate 4% in the UK. US dealers also fared better than some other regions, with an increase of 19%, while businesses in markets within Africa reported an aggregate increase of just 5%.

There were also differences between sales in the primary and secondary markets. Of the fine art dealers responding, 55% worked solely in the primary market, 11% in the secondary market, and the remaining 34% worked in both (with around 60% of sales made in the primary market and 40% in the secondary market in 2021).

Dealers in Asia had among the most substantial increases in sales, with an aggregate rise of 31%, with some of the strongest advances in Japan, Hong Kong SAR (China), and Singapore

Figure 2.4 | Average and Median Sales in the Primary versus Secondary Markets 2020–2021**a. Average Sales**

\$ thousand**b. Median Sales****\$ thousand**

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Figure 2.4a shows that the average sales in all segments increased, with those at the higher end driving much of the advance. It is also clear that average sales for primary market dealers (\$1.9 million) were considerably lower than those in the secondary market (\$3.8 million) or for those working across both markets, who had the highest average of \$4.4 million.

Considering median sales (or the middle of the market), which is less affected by very high values for individual businesses, sales in the secondary market and for businesses operating in both markets still rose, however, those in the primary market, along with those in antiques and decorative arts, actually decreased slightly from \$375,000 to \$300,000. This underlines again that in the primary market in particular, some top-tier businesses have skewed average sales and growth higher, while others, particularly those with lower turnover still had a challenging year in 2021. Dealers working across both noted that sales in the secondary market were steady or stronger, based on supply, as collectors waited for specific works to come to market, while those in the primary market remained challenging, driven more by exhibitions and live engagement.

However, it was still a challenging period in secondary sales, remaining a seller's market, with dealers reporting their greatest difficulty being finding high-quality works to sell.

While it was easy to sell very specific pieces, mid-value, mid-quality works, or 'fairly good' examples by top artists were more difficult to sell than in other years. There were parallel issues in supply in primary sales, with what dealers described as the 'race to find a very few fashionable artists getting more frantic'. Some were concerned about the speed the primary market was moving at in the last few years, with relatively new artists spiking to prices in excess of \$1 million in a very short space of time, but without any certainty that they might be in demand in 20 years.

The average number of artists represented by primary market galleries was stable on 2020 at 20. Although there was much variation depending on turnover and other factors, across all galleries, the share of representation in the primary market in 2021 was:

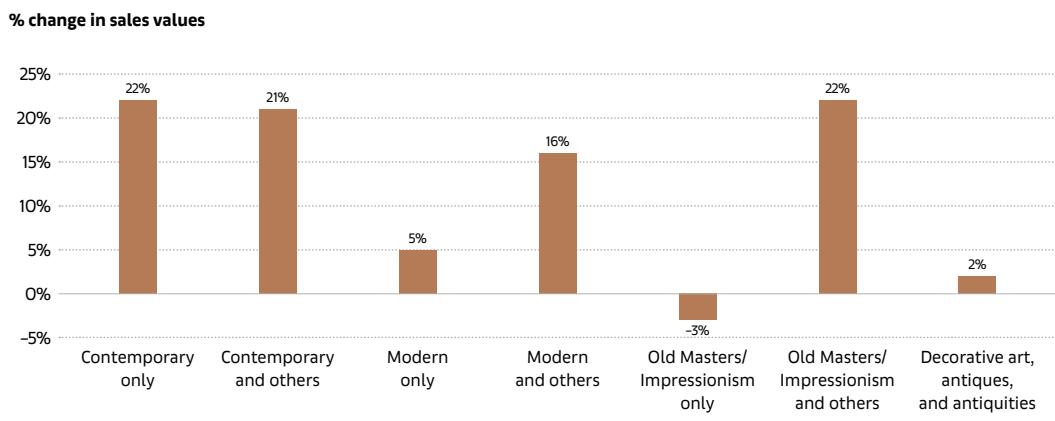
- 39% emerging artists, defined here as artists developing in their careers that have been showing in galleries or museums for less than 10 years;
- 50% mid-career artists, defined as artists showing for more than 10 years in galleries or museums, and with an established name and reputation, but not yet considered top-tier; and
- 12% top-tier artists, that is those with a strong and well-established secondary market in the auction or gallery sector, selling regularly for prices in excess of \$100,000.

Across all primary market dealers, the highest share of sales in 2021 came from mid-career artists (47%), with 38% from emerging artists and 15% from the top-tier. However, this small share of top-tier artists was due to the fact that there were fewer businesses with artists in this category. For those that represented at least one top-tier artist, the shares were more skewed to the higher end: 44% of their sales came from their top-tier artists, 31% from mid-career, and 25% from emerging.

For businesses operating in both the primary and secondary markets, the number of artists represented was higher (at 29), which included an average of four estates of deceased artists. This indicates a slight narrowing in focus, with a reduction from 31 artists in 2020 and 34 in 2019.

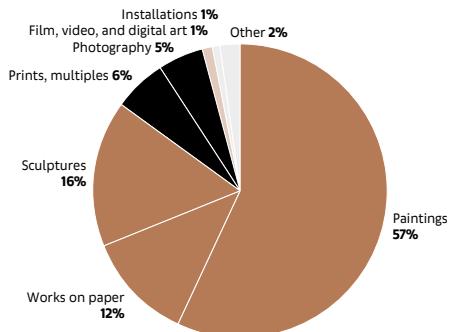
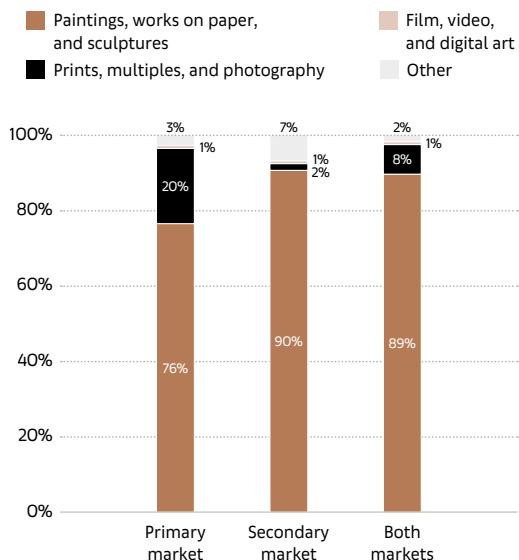
Excluding deceased artists' estates, the average representation for these dealers in 2021 was more concentrated on top-tier artists (27%), while emerging artists had the lowest share (20%).

However, like their peers in the primary market, the largest segment of artists they represented was mid-career artists, which made up 53% of the total. In terms of the sales generated by different tiers of artists, excluding deceased estates and for those dealers that included at least some top-tier artists in their programs, these generated the most sales accounting for 42% by value versus 35% from mid-career and 23% from emerging artists.

Figure 2.5 | Average Change in Turnover by Dealer Sector 2020–2021

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Looking more closely at the specific sectors dealers were active in, those focused on the contemporary art market tended to fare better than others, with growth of 22% for those only dealing in contemporary art, and 21% for those mixing contemporary and other sectors. Dealers operating solely in the Modern art sector had a more moderate increase of 5%, however, those who mixed Modern art with other sectors such as contemporary or Impressionism saw a rise of 16%. The relatively small number of respondents operating solely in older sectors of the market such as Old Masters and Impressionism saw a fall in sales of 3%. However, again, those that mixed these sectors with contemporary, Modern, or other older sectors were more on par with their peers (22%). Finally, dealers in decorative art, antiques, and antiquities markets reported only a marginal rise of 2% on aggregate. While sales were stable, this was after a particularly poor year in 2020 when sales fell 33%, indicating continuing pressure on dealers in this part of the market. As always, the performance within these sectors varied significantly, and tended to be better for dealers at the higher end regardless of the sector.

Figure 2.6 | Fine Art Dealers' Share of Sales by Value and Medium in 2021**a. All Fine Art Dealers****b. By Market Segment**

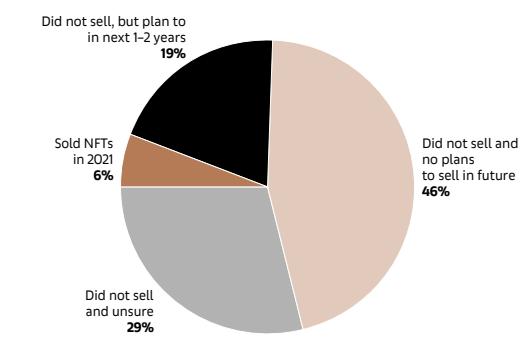
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In 2021, the bulk of value from sales in the dealer sector came from the more traditional mediums of paintings, sculptures, and works on paper. Analyzing the share of sales (weighted by turnover) of fine art dealers only, Figure 2.6 shows these three mediums accounted for a combined 85% of sales by value, with paintings being the largest. Prints, multiples, and photography made up a further 11% and digital, film, and video art just 1%. Although varying slightly by segment, paintings also accounted for the most sales regardless of what area of the fine art market the dealer operated in. Prints, multiples, and photography had a larger share of sales for primary market dealers, including 9% in sales of photographic works. Digital art sales made up 1% of the value of sales in the primary market, which underlines that a significant portion of the activity in sales of NFTs related to digital art in 2021 took place outside the traditional gallery framework.

It is interesting to note that despite the interest from collectors (see Chapter 4) and activity via external platforms (see Chapter 1), NFTs did not make a major impact in terms of sales values in the dealer sector in 2021. Just 6% of the dealers surveyed had sold NFTs of any kind or artworks associated with NFTs in 2021. For most of the dealers that had worked in the contemporary market exclusively or in combination with other sectors (89%), the majority of their NFT sales related to digital art (around 90% in terms of both the total number and value). The average number of NFTs related to digital artworks sold was six and these had an average price of just over \$36,000. The average price of non-digital art sold with NFTs was considerably higher at \$112,500, although these made up just 5% of the total value of NFTs sold (with the remaining 5% in other collectibles or categories).

A further 19% of the sample had not sold NFTs in 2021 but were interested in doing so in the next one to two years, whereas just under half (46%) of the dealers reported that they had not done so in 2021 and had no interest in doing so in future. This was as high as 79% of respondents in the decorative art and antiques sector, and lowest for those in the primary market (38%). The remaining 29% had not made sales in 2021 but were unsure whether they would sell NFTs in future or not.

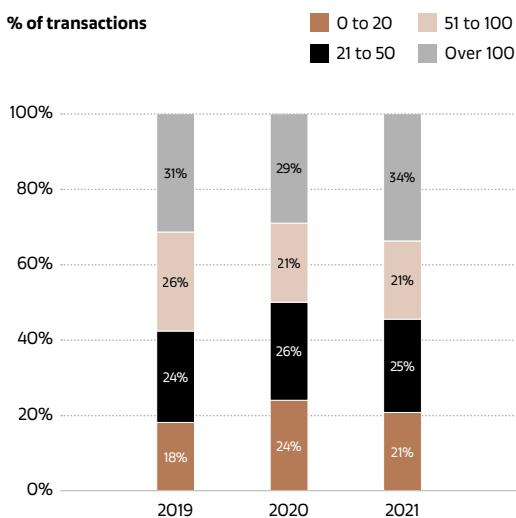
Figure 2.7 | Share of Dealers Selling NFTs in 2021



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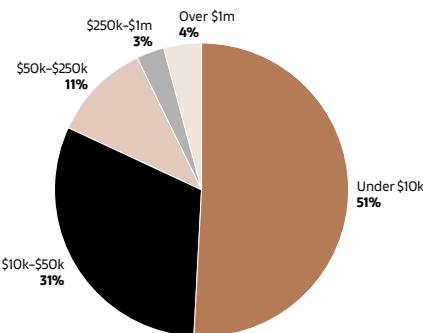
**Just 6% of dealers had sold NFTs in 2021.
A further 19% had not, but were interested in doing
so in the next one to two years**

Figure 2.8 | Share of the Volume of Sales by Dealers 2019–2021²⁸



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Figure 2.9 | Share of the Volume of Sales by Price Bracket in 2021



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Along with the increase in aggregate values in 2021, the volume of sales (or number of transactions) also rose, with an increase in median number of works sold from a reported 45 by this sample in 2020 to 55 in 2021, on par with the number of works sold in 2019. Just over one third of dealers reported selling over 100 works in 2021, a 5% increase from 2020.

The share of the volume of sales in different price brackets was relatively unchanged for the last two years, with most works (82%) continuing to sell for less than \$50,000, stable on both 2020 (83%) and 2019 (84%). There was a shift upwards in the number of sales at prices of over \$1 million to 4% versus 1% in 2020 (and 2% in 2019). This fits with the evidence of a greater uplift in sales for larger dealers and an increase in spending at high price levels by HNW collectors (see Chapter 4).

²⁸ Percentages reported here and in the Figures throughout the report are rounded to their nearest integer (apart from those less than 0.5%). In some cases, therefore, the integers in charts do not sum to 100% (but sum to 99% or 101%) due to rounding.

When dealers were asked at the end of 2020 about the year ahead, a majority of 58% had been optimistic for better sales in 2021. This majority edged up at the end of 2021 but there were differences between regions and in different segments of the market. When they were surveyed mid-year in 2021, only half of the dealers thought their annual sales would be higher than in 2020. The year turned out better therefore for some of these businesses, which is likely to have motivated the higher levels of optimism.

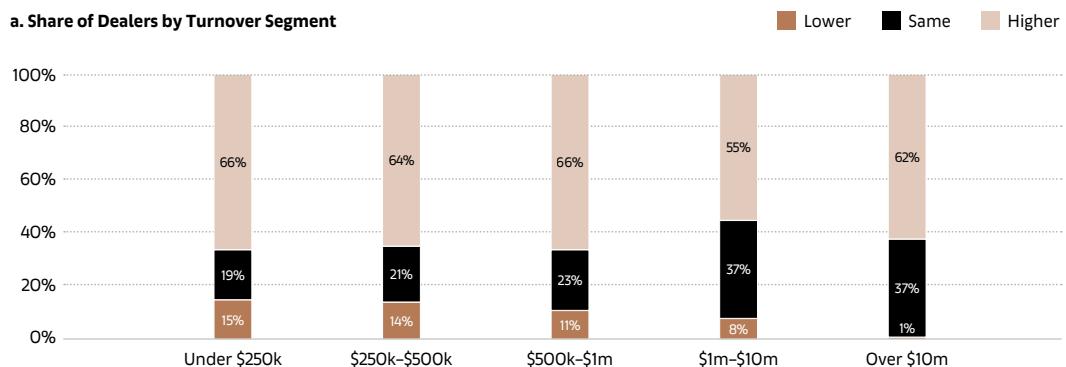
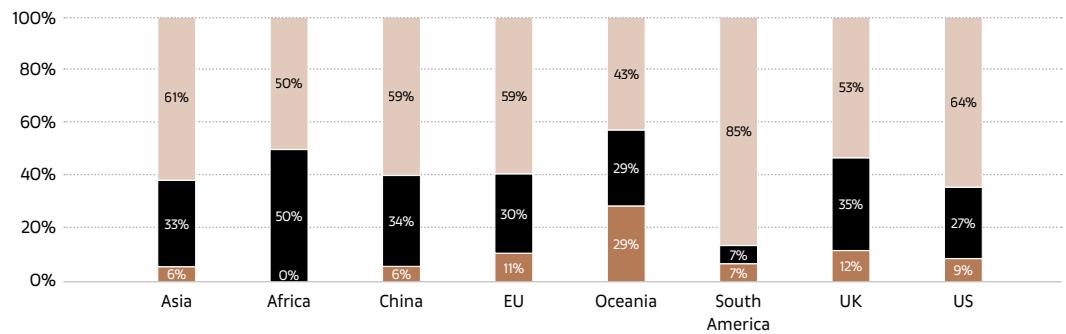
At the end of 2021 and looking forward to the year to come in 2022:

- 62% of dealers expected an improvement in sales in 2021, including 16% predicting a significant improvement;
- 27% expected sales to be about the same as in 2021; and
- 11% expected sales to decrease (down from 15% when surveyed in December 2020).

Some of the highest levels of optimism about the year ahead came from dealers in South America, with 85% predicting an increase (and 26% a significant increase), with a particularly high level in Brazil, where 31% of dealers anticipating substantially higher sales. There was also high optimism in the US as well as Asia, including Japan (where 64% of respondents expected a rise in sales) and China (59%).²⁹ Although the majority of dealers in Europe thought sales would improve, 12% felt they would decline. Dealers in the UK were slightly more pessimistic (12% expecting declines) than some EU markets such as France (6%). But in Germany, a higher than average 19% of dealers expected a deterioration in 2022, with 24% predicting no change, signaling concerns in some parts of the market about how the year will progress.

A majority of dealers at all levels of turnover expected sales to improve, but the largest businesses were the most optimistic about 2022. Nearly all of the dealers with turnover of greater than \$10 million anticipated stable or rising sales, and the greatest share expecting declines, although still a minority, were those with turnover of less than \$500,000. Lingering uncertainties over the future of the art fair calendar in 2022 may have moderated some of the optimism in the segment between \$1 million and \$5 million, with just 55% predicting higher sales. Anecdotally, while many dealers had reportedly sold well at events that did go ahead in 2021, there were concerns about effects on future sales from a persistent reluctance to travel internationally and uncertainty regarding possible restrictions on events in the coming year.

²⁹ Unless otherwise specified, "China" refers to the aggregated results from Mainland China and Hong Kong.

Figure 2.10 | Dealers' Outlook for Sales in 2022**a. Share of Dealers by Turnover Segment****b. Share of Dealers by Region**



2.3 | Dealer Margins

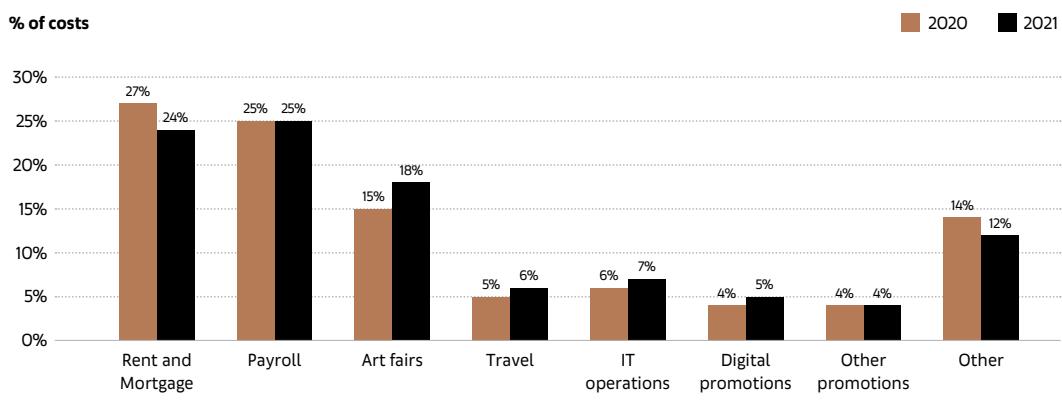
While many dealers' priorities shifted towards widening their client base, exhibiting at art fairs, and increasing sales in 2021, as the uncertainty about the effects of COVID-19 on the market persisted, many were also keenly focused on controlling costs in an attempt to remain profitable.

An assessment of the breakdown of their costs showed that payroll and rent remained the two largest components of business expenses in 2021, accounting for around half of their operating costs. While government supports for payroll, rent, and other overheads were available in 2020, most schemes were phased out partially or completely in 2021, leaving some dealers in a precarious position. However, the majority of dealers (59%) managed to maintain the numbers employed, and 27% increased employees, close to the share that had downsized in 2020 (28%), restoring some equilibrium in employment and keeping the proportion of costs relatively stable year-on-year.

To try to deal with the issue of rising rents, some businesses opened lower-cost office and exhibition spaces and experimented with temporary and collaborative ventures. Prior to the onset of the COVID-19 pandemic, the structure of businesses was already evolving, with an increase in the diversity of business models in response to changing sales contexts and rising costs. Despite the changes, the most common business model was still based on working from a gallery with a dedicated exhibition space. The survey of dealers in July 2021 revealed that 75% of dealers operated from a traditional gallery or exhibition space, and 21% from an alternative physical premises such as an office or shop (with 13% of these having premises where works of art or objects could be viewed by appointment either on-site or elsewhere). Just 4% operated online-only galleries although this was up by 1% from the share reported in a similar survey of the sector in mid-2020.³⁰

Rather than a radical change in business structures, the small reduction in the proportion of rents in total costs is most likely due to the increase in travel and art fair expenses as dealers began to take part again in some local and international events. The survey indicated that one third of dealers' operating costs in 2019 were accounted for by art fairs (26%) and travel (7%), higher than either payroll or rents. The share of costs from art fairs dropped to just 15% in 2020 as many events were cancelled, but this increased again in 2021 to 18%, with a small rise in travel from 5% to 6%. When asked about work-related travel, of the 95% of respondents who engaged in travel connected to their businesses, only a minority (7%) reported that there had been no change in their schedules due to the pandemic over the last two years. The majority (64%) reported that travel had reduced,

³⁰ See Arts Economics (2021). 'Resilience in the Dealer Sector, A Mid-Year Review', *Art Basel and UBS*, available at artbasel.com/about/initiatives/the-art-market.

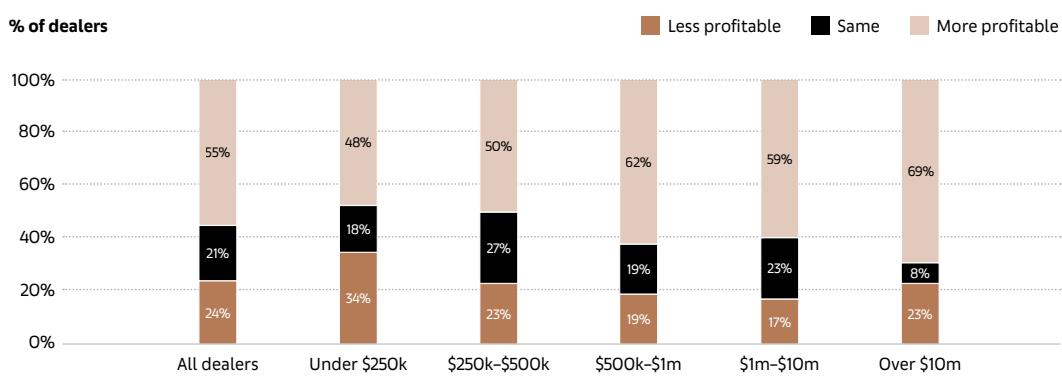
Figure 2.11 | Share of Total Costs for Dealers 2020 versus 2021

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and that this was a temporary change. But 29% felt that their schedules of work-related travel had changed permanently. While some fairs did not run at their full capacity, in 2021, dealers also took different approaches to their exhibitions, such as taking smaller booths at major fairs to keep costs down, presenting solo exhibitions, bringing work more tailored to specific audiences, and pre-selling works in order to guarantee that certain expenses were covered. (Fairs are discussed in more detail in Section 2.7.)

IT operations, including websites, hardware, and software, along with digital and online promotions made up 12% of costs, up marginally by 2% on 2020 (and from 6% in 2019). Despite the growing importance of digital strategies, the cost associated with digital promotions was still just over half (55%) of dealers' total promotion budgets (including offline activities and marketing).

In 2020, the majority (54%) of businesses reported that the drop in sales meant that they were less profitable than in 2019. However, 28% reported being more profitable (with 7% significantly more so). Many cited that the reduction in art fair and travel costs, staffing, and other areas had led to a more lean and efficient operating structure, allowing them to increase their profitability despite declining revenues. In 2021, as sales picked up and dealers remained cost conscious, there

Figure 2.12 | Change in (Net) Profitability 2020 versus 2021

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was a significant rise in the number of businesses making more profit. Across all dealers, 55% were more profitable than in 2020, 21% were about the same, and 24% were less profitable.

But the findings on profitability also provided further indications of some increasing consolidation at the high end and the lack of progress toward a more egalitarian marketplace. The segments remaining under the most pressure were the smaller dealers who had seen the least uplift in sales. Just over one third (34%) of businesses with sales of less than \$250,000 reported being less profitable in 2021 than in 2020, and just under half (48%) earned more profits. At the other end of the market, 69% of dealers turning over more than \$10 million had higher profitability, the highest share by far (although influenced in part by having had the highest share reporting reduced profits in 2020, when 58% of businesses in this segment reported a decline).

There was also considerable regional variation: 71% of dealers in the US reported higher profits in 2021 than the previous year versus 48% in the UK and 47% in Germany. While the majority (58%) of dealers in China had higher profits, 32% reported a decline, on par with the UK, and just ahead of France (30%).



2.4 | Buyers

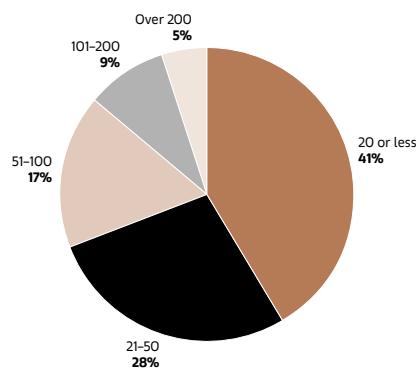
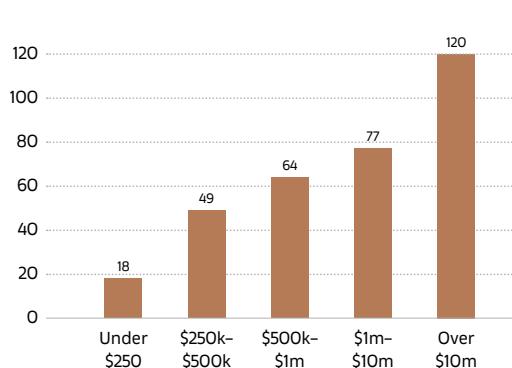
A key focus for all dealers in the past two years has been maintaining communication and sales with their existing client base, and many noted how important their established buyers were to their businesses in 2020 and 2021. However, the need to refresh and expand their networks has consistently been one of the fundamental challenges faced in the sector, whether it is finding new collectors from different ages or groups, or looking to different regions to expand sales to a more geographically diverse set of buyers.

Without the full program of fairs and other in-person events and with limitations on travel in both 2020 and 2021, there were much fewer opportunities to build new relationships with buyers. While many dealers used their own online outreach and art fair OVRs to maintain contact and initiate conversations with new potential clients, some noted the problem of sustaining relationships and sales without an opportunity to meet collectors and let them view works in person. Online channels were seen as an initiation point that might lead to sales and the building of longer-term relationships at exhibitions and fairs.

The survey confirmed the pressure on expanding client bases, with the average number of individual buyers being sold to declining to 50 (with a median of 25) in 2021, from 55 the previous year and 64 in 2019. The majority of dealers (69%) had 50 clients or less, while just 14% had over 100. While the large decline in the average has undoubtedly been influenced by the pandemic, it is also part of a slower-moving trend over time to sales being focused on fewer buyers. The average number of buyers reported in surveys in 2016 was 75 and this has gradually declined in each year since.

As in previous years, the average number of buyers increased in proportion to the dealers' level of turnover: dealers with turnover of greater than \$10 million, many of which had multiple premises in different locations, dealt with an average of over 120 buyers (an expansion from 106 in 2020), while those with annual sales of less than \$250,000 averaged 18 (down slightly from 19 in 2020).

The average number of individual buyers being sold to declined to 50 in 2021 from 55 the previous year and 64 in 2019

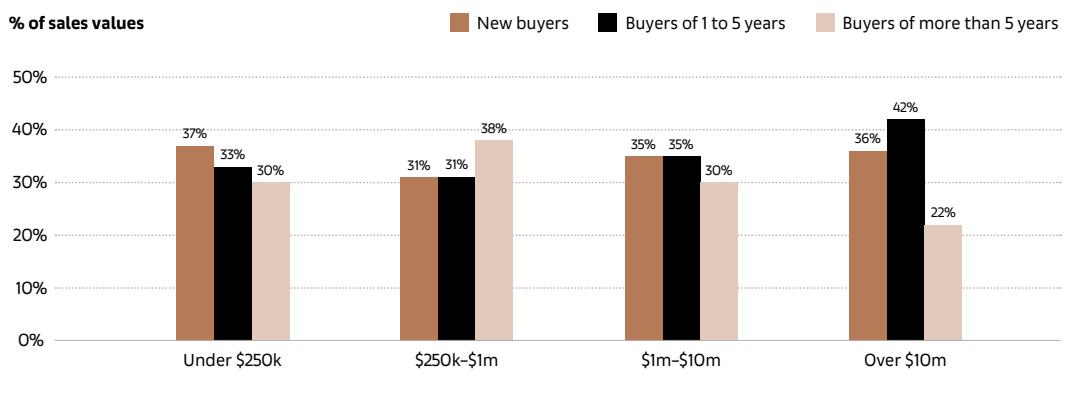
Figure 2.13 | Number of Buyers in 2021**a. Share of Dealers by Total Number of Buyers****b. Average Number of Buyers by Dealer Turnover**

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While many dealers focused on maintaining their relationships with their existing client base in 2020, finding new buyers and expanding their geographical reach became a priority again in 2021 as fairs and other events returned to some extent. When asked what share of their sales went to different buyer segments, dealers reported:

- 35% went to new buyers that were buying from them for the first time in 2021 (up by 2% from the surveys in 2020);
- 33% were buyers they had dealt with for one to five years (from 37% in 2020); and
- 32% were buyers they had dealt with for more than five years (up by 2%).

The share of new buyers differed somewhat by buyer turnover level, but to a lesser degree than previous years. As was the case in 2020 and most recent years, new buyers were more important for dealers with lower turnover levels, accounting for 37% of sales for those with turnover of less than \$250,000, down from 45% in 2020. In this segment, the higher share of sales to new buyers has often been due to difficulties in gaining repeat business, and this may have been a continuing issue in 2021 as the sales to buyers of one to five years also fell from 39% in 2020 to 33%.

Figure 2.14 | Share of Dealer Sales to Buyer Groups by Purchase History in 2021

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The losses in these two segments was made up for by a substantial increase in the share of sales to their most established clients of over five years (from 16% to 30%). This may mean that dealers had to rely more on sales to regular clients as new buyers thinned out, and indicates that they pursued sales on all fronts during the year.

After a dip in 2020, there was a large increase in sales to new buyers by the largest galleries in 2021, from 24% to 36%. Finding new buyers has been repeatedly flagged as being important by dealers in this segment, as some of their active collectors reduced their activity following high spending up to 2019. Dealers noted that the return to some key fairs and exhibitions provided greater opportunities to extend their programs to new collectors in 2021, with many noting that their online strategies were often a means of introduction or referral, complementing offline programs for sales and retention.

Sales to established buyers were most important for mid-level dealers with turnover of between \$250,000 and \$1 million (at 38%). However, sales across the spectrum of buyers were important to all dealers in 2021, fitting with more anecdotal reporting that they were actively pursuing sales at all levels, rather than just concentrating on high value ones.

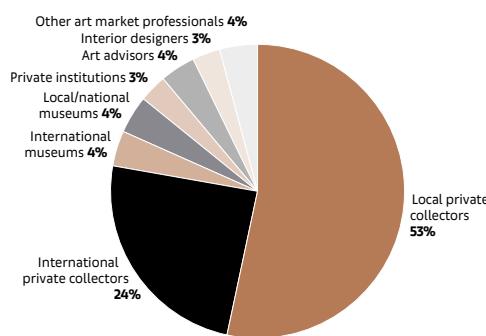
'Our sales improved in 2021, but only through pushing at all levels. We made sure we maintained and reconnected with our existing clients at home and overseas, while also trying to initiate new conversations online and offline with collectors that were not yet familiar with our program. We are really working two jobs – keeping up all of the more proactive online strategies that we introduced during the pandemic, plus back to our face-to-face meetings in the gallery and at fairs.'

Most of the sales in the sector in 2021 were to private collectors, as was the case in previous years. The portion of sales to private individuals rose from 72% in 2020 to 77% in 2021, with the largest share by value to collectors within the same region as the dealer's business. A further 7% were made to interior designers and art advisors (both of whom predominantly worked for private clients), which means that around 84% of the value of sales made by dealers were to, or on behalf of, private individuals.³¹

Sales to other members of the art trade were stable year-on-year (at 4%) and these were again most important to dealers in the antiques and decorative art sectors (at 13%, up by 5% year-on-year and versus just 2% for those dealing only in contemporary art).

Sales to corporations and private institutions were down slightly to 3% (from 5% in 2020), as was the total share to museums, at 8% (from 10% in 2020, and with sales to local museums accounting for this loss).

Figure 2.15 | Share of Dealer Sales by Buyer Type in 2021



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³¹ As noted in previous years, the 4% of sales made to art advisors may underestimate their role in sales, as some collectors work with advisors prior to a sale, researching the market and sourcing works from dealers before making a final purchase directly from a dealer.



2.5 | Art Fairs

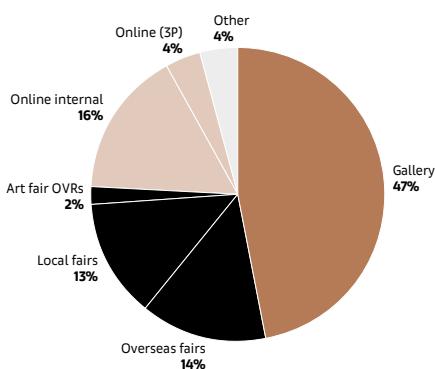
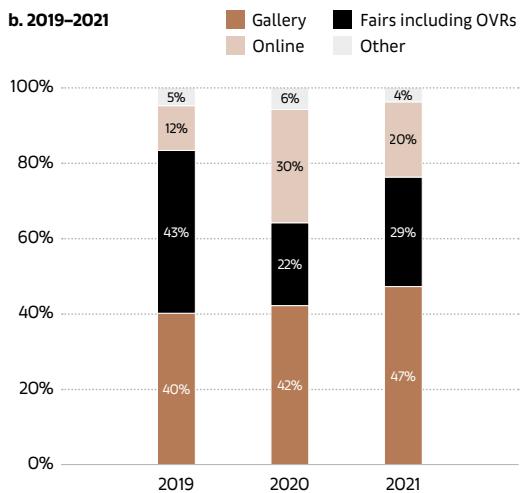
Sales Channels

Until 2019, an increasing share of sales made by dealers took place at art fairs, with these events becoming central to the livelihoods of many businesses and a critical point of outreach to established and new collectors in different regions around the world. The cancellation of the majority of fairs in 2020 meant that sales via art fairs were radically reduced, while the pivot to e-commerce expanded significantly. 2021 brought further changes, with some shifts back to selling in person in galleries and at events. However, the breakdown of sales was still markedly different from the pre-pandemic period.

To assess how lasting these changes were in 2021, the turnover-weighted share reported by dealers on their sales via various channels in 2021 are set out in Figure 2.16, based on the following choices:

- Gallery sales (transactions that were from or facilitated by a visit to their gallery or premises);
- Overseas fairs (sales made at or directly connected to in-person art fairs outside of the reporting dealers' primary country of business);
- Local fairs (sales made at or directly connected to in-person art fairs within the reporting dealers' primary country of business);
- Art fair OVRs (sales carried out or originating from a fair's OVR or other online fair platform);
- Online internal (sales carried out entirely online via the dealers' website, social media channels, OVR, or email);
- Online other third-party (sales carried out entirely online facilitated by a third-party or '3P' company or platform); and
- Other (including sales carried out privately, through phone calls or any other channels).

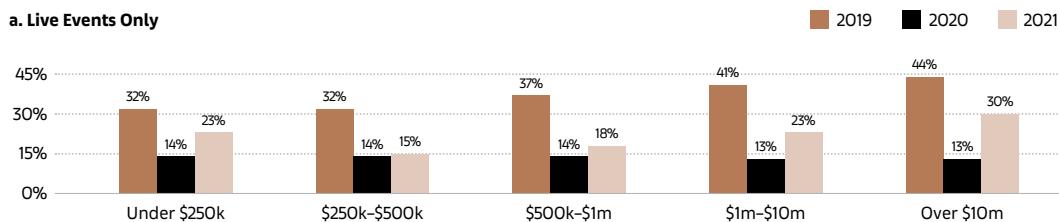
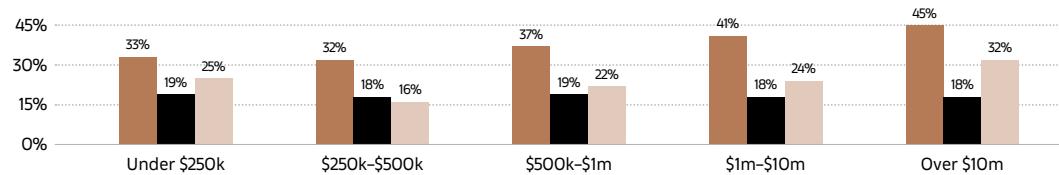
In 2019, sales at art fairs accounted for 43% of all sales made by dealers (42% from live events and 1% from art fair OVRs), which exceeded those categorized as taking place in their gallery premises. The share of art fair sales from live events declined dramatically in 2020 to just 13% of the total, but with an additional 9% made through art fair OVRs. This was matched with an equally notable rise in online selling of 12% to 30% (with online excluding the OVRs of art fairs). In 2021, as the fair calendar resumed, even with a reduced number of fairs and limited capacity in some, there was some reversal in this trend. Fair sales advanced to 29% (including OVRs), up by 7% year-on-year, but still nowhere close to the 43% reported in 2019. Sales at live events were also significantly more

Figure 2.16 | Share of the Value of Dealer Sales by Sales Channel**a. 2021****b. 2019–2021**

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balanced between local and overseas fairs in 2021 (versus in 2019 and previous years where overseas fair sales were close to double local events). The corollary of the return of gallery exhibitions and fairs was that online sales by dealers lost some share, falling from 30% to 20% but again, still well above the level of 2019 (12%).

In terms of art fair sales, the biggest declines in 2020 were for businesses at the highest end of the sector, with dealers having a turnover in excess of \$10 million falling in share by 31%. But they also recovered most in 2021, with art fairs expanding to 30% of total sales, a rise of 17% year-on-year from 2020, but still below 2019 (44%). The smallest dealers with turnover of less than \$250,000 saw a rise of 9% year-on-year (with the majority of sales at local events). The lowest increase and the lowest sales made at fairs was by mid-sized dealers: businesses with turnover from \$250,000 to \$500,000 had the lowest fair sales (15%) and the share only increased by 1% from 2020, remaining 17% below the level of 2019.

Figure 2.17 | Share of the Value of Art Fair Sales by Dealers by Year and Level of Turnover 2019–2021**a. Live Events Only****b. Live Events and Art Fair OVRs**

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Estimates for art fair sales based on the reported data from previous surveys indicated they could have accounted for up to \$16.6 billion in 2019. Some of these sales were made in advance of the fair (15%), and others after the event but in connection to participation (21%), with 64% (or \$10.6 billion) estimated as sales at art fair events themselves. Given the turnover-weighted shares outlined above, the total art sales attributable to a fair in 2021 (before, during, and after events and including art fair OVRs), would not have surpassed a maximum of \$10 billion (from \$6 billion in 2020).

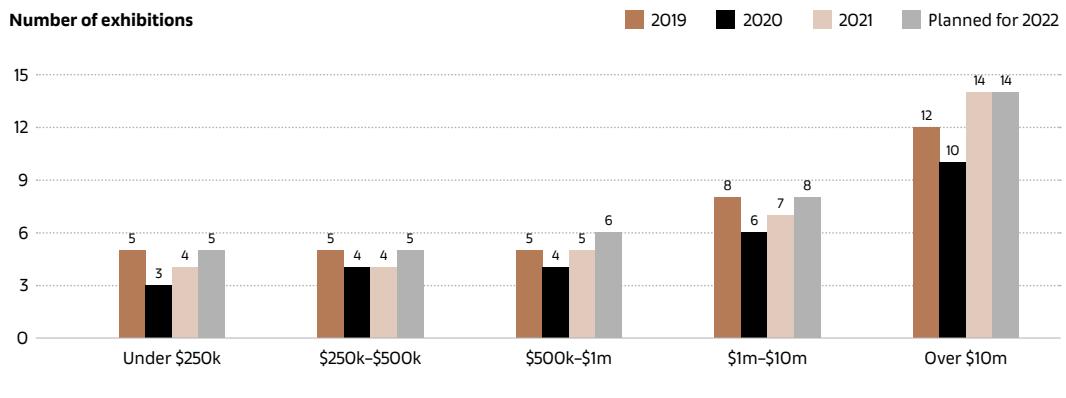
As noted above, some businesses were able to maintain or increase their profitability by reducing costs, and although art fairs costs edged up in 2021 as a share of total operating costs for dealers, they were still substantially lower than in 2020 at 18% and 26% in 2019.

Exhibitions and Fairs in 2021

One of the biggest impacts of the COVID-19 pandemic on dealers' businesses was a retreat from live and in-person exhibitions and events, including those in their own galleries and externally at fairs and in other institutions. Over 90% of dealers surveyed at the end of 2020 had to close their premises during the year and the average closure period was three months. 2021 continued to be marked by uncertainty, as new variants of COVID-19 and the variable rollout speed of vaccine programs in different regions created ongoing difficulties for artworld events. As noted above, while 97% of those dealers that had a premises were open when surveyed in December 2021, periodic lockdowns were common in some regions and some of the events that went ahead did so under significantly different conditions than in pre-pandemic times. Many restrictions remained in place throughout the year, including those on travel for some periods. Even when these were lifted, there was lingering hesitancy with regard to full engagement with live events, as some collectors and dealers remained safety-conscious and risk-averse. Dealers had to continue to adapt their exhibition plans in the face of this persistent uncertainty, although many commented on the magnitude of enthusiasm among collectors to see artworks in person again.

'We've noticed that as the artworld's virtual sphere increased, so did the need, or thirst even, to view artworks in the flesh. Many of our international clients were grateful to be back in the bustling fair environment and see works and people in person. And obviously, it's also more convenient for us to discuss sales in person than over email.'

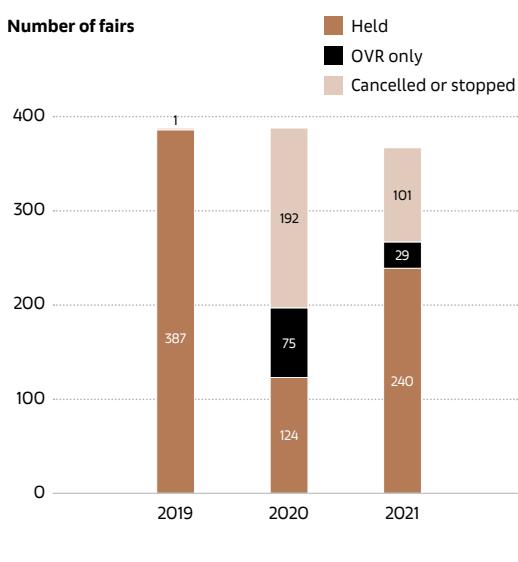
**Even when restrictions were lifted,
there was lingering hesitancy with regard to full
engagement with live events, as some
collectors and dealers remained safety-conscious
and risk-averse**

Figure 2.18 | Average Number of Gallery Exhibitions by Year and Level of Turnover 2019–2022

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In 2019 before the pandemic, dealers in the sample held an average of seven exhibitions in their galleries, ranging from five for the smallest businesses with turnover of less than \$250,000 up to 12 for those with sales in excess of \$10 million. As the pandemic restricted activities and galleries focused on cost-cutting measures in 2020, programs of exhibitions were reduced to five on average, with declines across all segments of the market. In 2021, galleries were able to boost their programs again although some of the effects of the pandemic were sustained, with the average increasing to six, but still below pre-pandemic levels for most galleries. The top end of the market was an exception with the average in 2021 (at 14) exceeding 2019 (at 12). Some reported that this was due to expanding their premises, including some that had opened in new locations in 2021, and most reported planning to maintain this higher level of exhibitions in 2022.

Most galleries plan to return to their pre-pandemic schedules in 2022, with the average reported at seven again. Galleries turning over more than \$10 million, along with mid-level galleries (between \$500,000 and \$1 million) expect to exceed their previous 2019 levels. Some noted that they were combining some online-only exhibitions with those in their galleries, which would mean a greater number of shows overall in 2022.

Figure 2.19 | Art Fairs Held 2019, 2020, and 2021

© Arts Economics (2022) with data from Artfairmag.com

improvement on 2020, the pre-pandemic schedule of events did not return fully and the number of live events was still substantially below 2019. According to the database of over 400 fairs, 387 art fairs were held in person in 2019. In 2020, this dropped to just 124 live events (with or without an additional OVR), 75 took place only online (including timed events and longer-term platforms), one fair was created, and 30 fairs closed (that is, they were either confirmed closed or had ceased in their usual format for at least three years), including Art Monaco, PAD Monaco and Geneva, Art New York, Art BAB in Bahrain, ARTBO, Art Berlin, Sunday Art Fair in the UK, and others.

While 2021 saw an improvement on 2020, the pre-pandemic schedule of events did not return fully and the number of live events was still substantially below 2019

In some regions also, galleries expected that there would be continued vigilance even in 2022 with regard to visitors and in-person events, and were planning for the systems of viewing by appointment, reduced capacity opening nights, and other limitations introduced in 2020 and 2021 to remain in place. While these changes had taken considerable adjustment, in some cases dealers felt that they had actually proved beneficial for their clients' experience and sales.

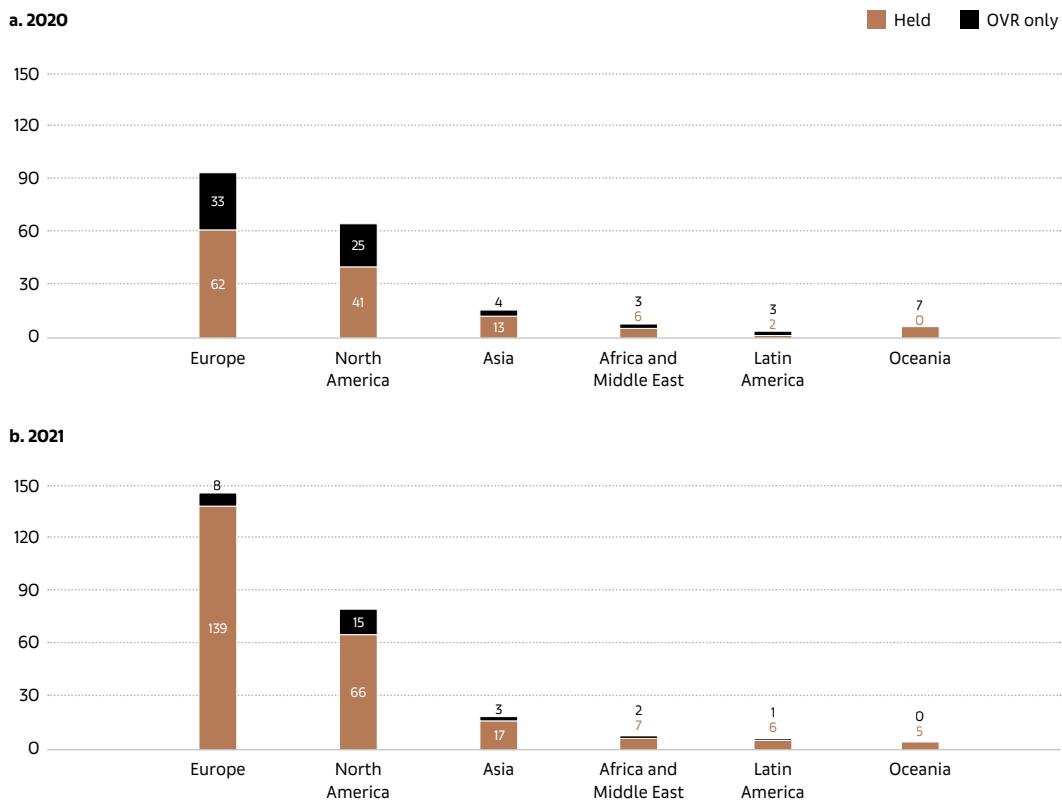
Despite continuing impediments, many art fairs were able to resume in 2021, with key in-person events held around the world, albeit sometimes under varying restrictions. Data on the art fair calendar was supplied for the report by the global art fair database, Artfairmag.com, which allows for comparisons and insight on how this schedule has changed since the pandemic. The data shows that, while 2021 saw an

In 2021, the art fair calendar was revived to some degree, with 240 in-person events held (with or without an OVR), 96 cancelled, and another five ceased. Seven new fairs were created during 2021 and 29 events went ahead as online-only events. This data indicates that at least 35 fairs were closed since the pandemic started (although some have continued in a different format), and just eight new events were created, leading to a net loss of events in this sector. Even for those still operating, several fairs have now not held a live event for two years running and with further restrictions and new variants of COVID-19, at the time of writing at the start of 2022, the calendar for the year ahead remains insecure and many fair businesses are under extreme financial pressure.

In 2021, the art fair calendar was revived to some degree, with 240 in-person events held, 96 cancelled, and another five ceased

In 2020, very few regions were spared from event cancellations, with 66% of in-person fairs in Europe cancelled, 55% in North America, and just under one third of those due to take place in Asia. Of those that went ahead in 2020, OVR-only events accounted for close to 25% of all events in Asia and over a third of the fairs in all other regions, including 60% or more in South America and Oceania. In 2021 on the other hand, live events dominated, and as set out in Figure 2.20 online-only fairs constituted around 20% or less in most regions, including only 5% of events in Europe. Cancellation rates were more moderate but were still evident in all regions. Excluding OVR-only fairs, the regional cancellation rates in 2021 were:

- 29% of art fairs cancelled in Europe (versus 66% in 2020);
- 33% of art fairs cancelled in North America (versus 55% in 2020);
- 26% of art fairs cancelled in Asia (versus 32% in 2020);
- 14% of art fairs cancelled in South America (versus 75% in 2020);
- 36% of art fairs cancelled in Africa and the Middle East (versus 40% in 2020); and
- 29% of art fairs cancelled in Oceania (versus all live events in 2020).

Figure 2.20 | Number of Art Fairs Held by Region in 2020 and 2021

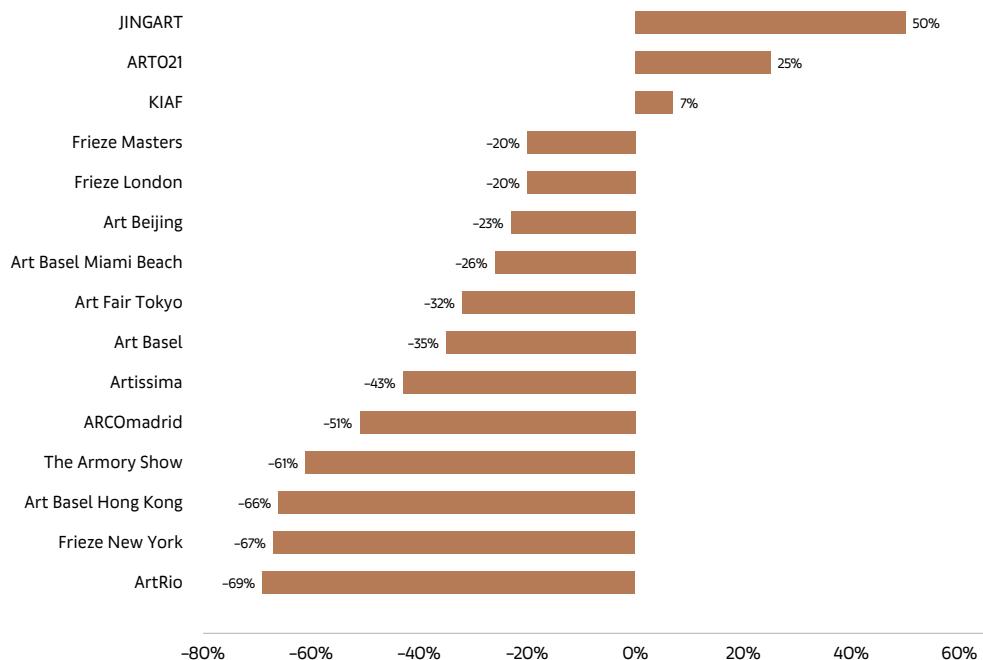
© Arts Economics (2022) with data from Artfairmag.com

Within regions, local and regionally focused fairs tended to dominate in 2021, accounting for a greater share of events than international fairs. Both dealers and fair organizers have noted that some of these fairs have done relatively well in 2021, given the continued reluctance of collectors to travel. Fairs in or close to major art markets or cities with dense populations of active HNW collectors were the most successful according to some dealers.

While many dealers were concerned with the loss of sales from the reduced art fair calendar, some in Asia and Oceania reported that they had actually seen benefits from the slower and less frantic

Figure 2.21 | Change in Visitor Numbers 2019 versus 2021 – Selected Fairs

% change in number of visitors



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schedule of events. They noted that due to the difficulties related to travel and quarantines, many collectors were forced to concentrate much more on domestic sales, and their local buyers were seen more often at local galleries and engaged with their programs because of their less busy overseas travel schedules.

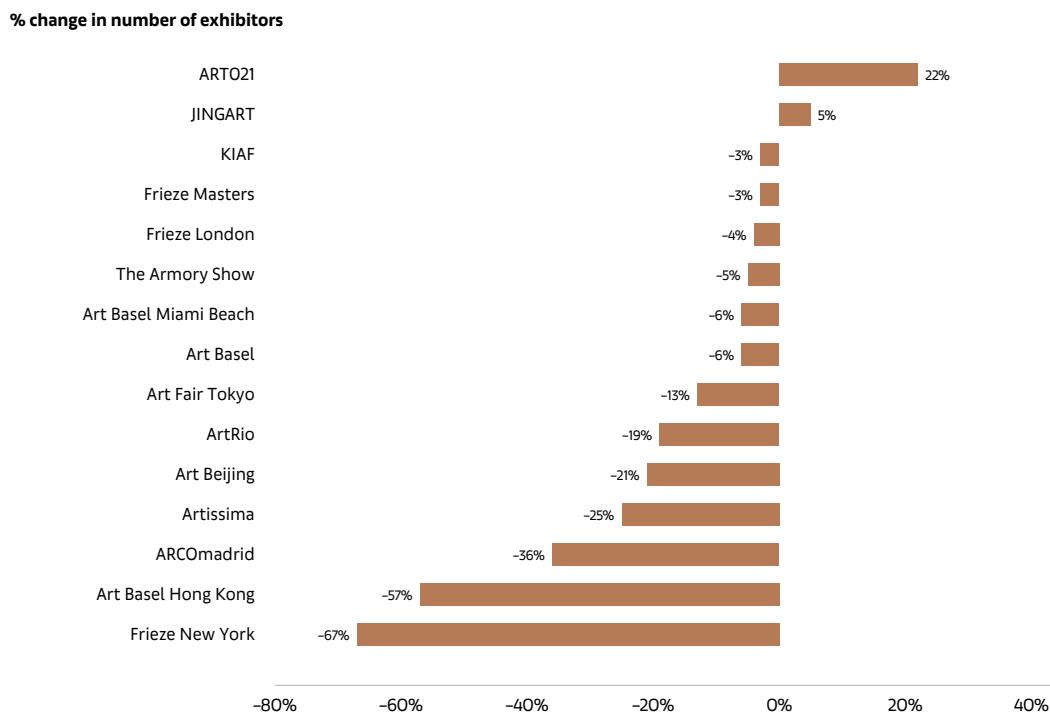
Using data supplied directly from individual fairs to Arts Economics for this report, Figure 2.21 shows the dramatic change in visitor numbers at a selection of major fairs in 2021 versus 2019. Most fairs saw a significant decline in foot traffic, with many still maintaining capacity limits and restrictions on the timing of entry as well as extending the duration of events. While visitor numbers can go some way to measuring an event's popularity, they often indicate more the

engagement of the general public in events rather than the number or strength of buyers. The vast majority of visitors to art fairs do not buy art, with the share reported anecdotally in recent years at around 5% or less at major international fairs. While some dealers and collectors commented on the change of atmosphere at events through having fewer visitors, this was seen as positive by some dealers, with a smaller, more focused group of attendees than in previous years being conducive to sales.

'Some of the first major fairs to come back brought with them very focused collectors – not everyone went, and they were mainly from the region, but the ones that did come were coming to buy. We really had to tailor the booths more than ever to bring what people in particular regions most wanted. The areas that had a well-healed local crowd did well, rather than those in cities that people had to travel to...we're not quite there yet.'

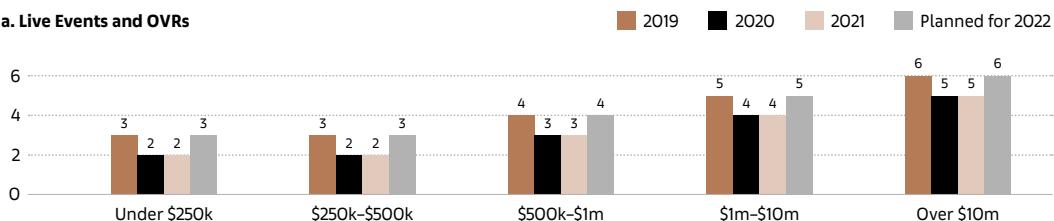
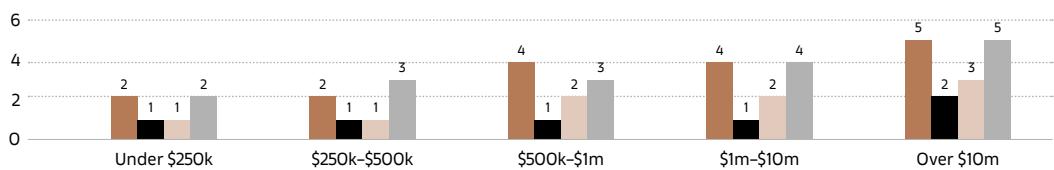
Apart from some fairs in Mainland China which bucked the declining trend, most major fairs also saw a decline in the number of exhibitors. The total number of exhibitors in the 15 fairs listed in Figure 2.21 declined by 19% (from around 3,200 to just under 2,600) due to a combination of factors, including continuing travel restrictions and quarantine requirements, logistical constraints and safety requirements at events, and, in some cases, hesitation by the dealers themselves to take part. While some fairs were scaled back, notably Art Basel Hong Kong SAR (China) and Frieze New York, both of which had less than half the exhibitors of 2019, others were less significantly affected with only very minor reductions in size, including the other two Art Basel fairs (Basel and Miami) and Frieze fairs (Frieze London and Masters) where the change in exhibitor numbers was 6% or less. However, some dealers noted that rather than automatically attending some fairs as they had done in the past, they were much more influenced by a cost-benefit analysis carried out on each individual fair. Most felt that it was regional impediments and travel restrictions, costs, or hassles that prevented them attending, and many described the urgency to re-engage at key international events to maintain contacts with clients and not lose touch with international buyers.

'By 2021, we had lost touch with some regions – we needed to go, and everyone went. It was much less optional than it was in other years. We adapted and did ok commercially by using a smaller booth – we had 80% of our usual sales, but 60% of our costs so it balanced out.'

Figure 2.22 | Change in Exhibitor Numbers 2019 versus 2021 – Selected Fairs

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While some fairs saw their international exhibitor numbers fall due to remaining restrictions on travel, the share did not decline markedly in many international events. In the sample of 15 fairs in Figure 2.22, the proportion of non-locally based or international exhibitors declined by just 6% from 39% in 2019 to 33% in 2021. In some of the largest international events such as Art Basel and Frieze London, international galleries still made up the majority, including 93% at Art Basel (from 91% in 2019). However, some events did see a drop in share including Art Basel Hong Kong SAR (China), where non-local galleries shifted from 74% in 2019 to 40% in 2021, and ARCOmadrid, from 69% to 55%.

Figure 2.23 | Average Number of Art Fairs by Year and Level of Turnover 2019–2022**a. Live Events and OVRs****b. Live Events Only**

© Arts Economics (2022)

With the slow return to the full schedule of events and continuing focus on cost concerns, the number of art fairs at which dealers exhibited in 2021 was still below pre-pandemic levels. Dealers reported averaging four art fair exhibitions in 2019 and this fell to three in 2020, but these included just one live event and two OVRs. In 2021, the average remained at three. But the ratio turned in favor again to live events, with two in-person fairs and one OVR. Figure 2.23 makes it clear how OVRs bridged the gap for dealers in 2020 and 2021, but views on how successful art fair OVRs had been for them during the pandemic were mixed, and many dealers found them significantly less useful than live events at either generating sales or making new contacts.

Some dealers noted that OVRs were '*limited and difficult to navigate with most of the benefits in terms of sales only at the start of the pandemic*', and also found that they tended to be only successful for presenting artists that collectors were already relatively familiar with or that were well-known to the public. While some found success reaching new collectors and maintaining visibility, many dealers had a relatively balanced view, seeing them as a complementary platform for fairs rather than an alternative.

'While OVR sales were not particularly strong, they provided an opportunity to reconnect with our existing clients overseas and initiate dialogues with those new to our program (about 50/50)...For us, the most significant function of OVRs was the initiation of dialogue, which eventually led to sales at in-person art fairs.'

While dealers at all levels saw a drop in the number of fairs in 2020 and 2021, most planned to be as active in 2022 as they had been prior to the COVID-19 pandemic, with many keen to return to the regular schedule in order to reach new clients.

'Art fairs are our life blood, especially for people who have never seen us or don't know what we do.'

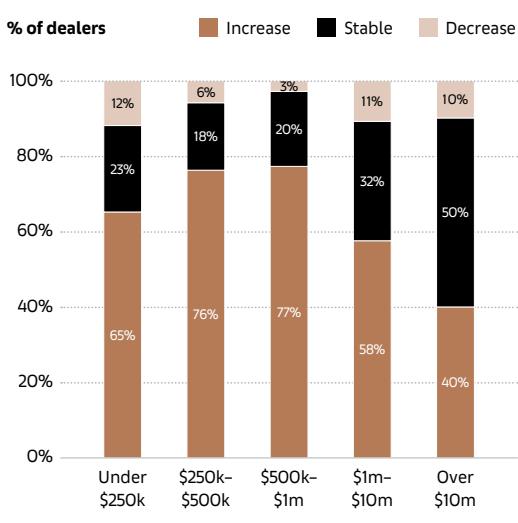
The last two years provided a significant break from the regular schedule of events, which had prompted more consideration about which fairs dealers would attend in future and how the format of these events might improve. Some dealers commented on the need for fairs to re-evaluate booth charges, which was an issue before COVID-19, along with their layout and duration in light of potentially more risk-averse and safety-conscious visitors. While some dealers felt that the restrictions on visitors in 2021 were disadvantageous to the mood (and sales) at fairs, creating an air of more hesitancy and caution, many felt that fairs had done well in running the shows that took place and that approaches to planning would need to continue to factor in precautionary measures even if not required by law. For some galleries, the more limited visitors and extensions of VIP days actually boosted sales, attracting more serious buyers and allowing more time for focused conversations.

Others felt the pandemic had brought to light deeper questions about the ethos and objectives of some fairs, with the possibility of more positive developments in their culture in future.

'Old hierarchical structures and 'boys clubs' will not be sustainable in the long term. During the last year, galleries were able to experience self-empowerment and act much more flexibly. The clever and innovative art fairs will develop a new communication culture and see themselves more as service providers and supporters of their exhibitors.'

'The cards are reshuffled. Physical art fairs will have to have strong online presences in order to remain interesting. Hierarchies are becoming flatter. New ideas and cooperative action are required.'

Figure 2.24 | Dealers' Outlook for Art Fair Sales in 2022



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'Our approach to the fairs we did was much less casual. We tend not to do pre-sales but in 2021, we pre-sold key top works to ensure we covered our costs. The conversations we had at the events were even more formal – there were more meetings scheduled, and in general, the mask-wearing and consciousness around safety meant there was much less casual conversation and mingling, and more focused discussions on specific works and artists.'

Looking ahead, around 11% of the sample of dealers surveyed said they were unsure about how their art fair sales would progress over the next 12 months. Of those that took a view, the majority (65%) predicted they would increase, and only 9% expected a decline. More smaller dealers anticipated increases in art fair sales, and there was only a small minority across all segments expecting less sales through this channel in 2022.

But some also feared a return to 'normal', commenting that there were too many fairs being planned in 2022, particularly with continuing collector reluctance in some regions, and that an excess of events could prove counter-productive. Many dealers noted that they would be altering their strategies in relation to fairs in the coming year, whether by taking smaller booths, or focusing on less risky or more saleable artists to cover costs, both of which could influence the content of exhibitions, the context in which art is viewed, and even the art that is produced by some artists to suit a particular presentation format (with many feeling this would be a negative development over the long term).

'Our approach to the fairs we did was much less casual. We tend not to do pre-sales but in 2021, we pre-sold key top works to ensure we covered our costs. The conversations we had at the events were even more formal – there were more meetings scheduled, and in general, the mask-wearing and consciousness around safety meant there was much less casual conversation and mingling, and more focused discussions on specific works and artists.'



2.6 | Online Sales and Strategies

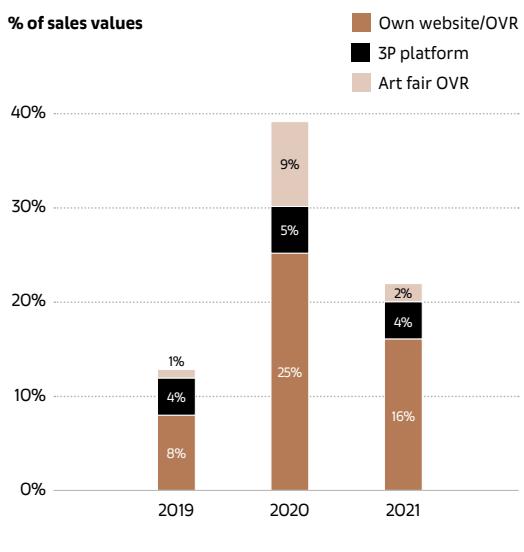
The most notable change in the way sales were conducted in the last two years was the rapid advance of sales via online channels. As noted in Chapter 1, the growth in e-commerce has been one of the most significant developments in the art market in the last two years, and online sales in the dealer sector have made an unprecedented and rapid advance, allowing businesses to remain profitable as access to other channels and events was restricted. As the COVID-19 pandemic forced businesses to close and events were cancelled, online sales shifted from just 12% of dealers' sales in 2019 (13% including art fair OVRs) to 30% in 2020, or 39% including art fair OVRs. In 2021, as fairs and gallery exhibitions resumed, this decreased to 20% (or 22% including art fair OVRs), but remained significantly higher than any period prior to 2020.

Definitions of what constitutes an online sale vary, but in this survey, respondents were asked to attribute their share of turnover accounted for by the following categories of online sales:

- Internal online sales – sales carried out entirely online via a dealer's own website, social media channels, an OVR, or an email (but without a visit to the gallery to view the work);
- Online via a third party – sales carried out entirely online facilitated by a third-party company or platform ('3P'), excluding an art fair; and
- Art fair OVRs – sales carried out or originating from a fair's online viewing room or other online fair platform.

It is notable that while sales via third-party platforms reverted to their pre-pandemic share (4%), and art fair OVR sales fell significantly (from 9% to 2%), sales via dealers' own websites, OVRs,

Figure 2.25 | Dealers' Share of Online Sales in 2019, 2020, and 2021

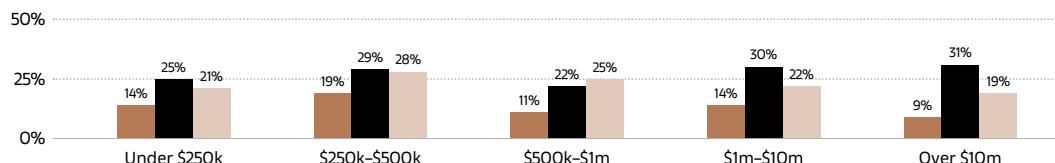


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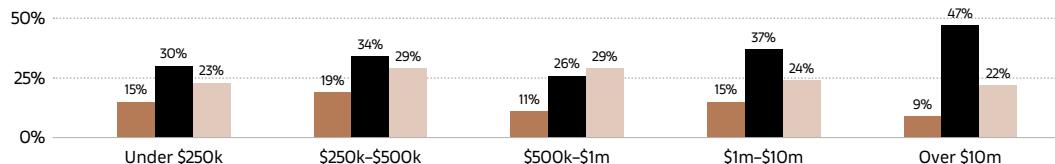
Figure 2.26 | Average Share of the Value of Dealer Sales Made Online in 2019, 2020, and 2021 by Level of Turnover

a. Online Sales excluding Art Fair OVRs

2019 2020 2021



b. Online Sales including Art Fair OVRs



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and other online platforms remained the largest channel for online transactions by a considerable margin. Although declining from a record high in 2020, these sales were also still double the level they were in 2019, accounting for 16% of total sales by value in 2021.

Dealers at all levels made a significant shift to online selling as the pandemic hit in 2020, and while online sales were generally more important for smaller businesses in previous years, those businesses with the largest turnovers showed by far the highest rise. Dealers in the \$10 million-plus segment more than tripled their online sales from 9% in 2019 to 47% in 2020, while smaller dealers with turnovers of less than \$500,000 saw much more moderate increases of around 10%.

However, in 2021, this was rebalanced again as fairs offered opportunities for sales and dealers at the highest end saw the biggest revision in their share of e-commerce. If art fair OVRs are included, online sales in this segment fell by 25% to 22%, while the next largest segment of dealers (with sales of between \$1 million and \$10 million) also saw a decrease of 13%. These shifts confirmed the more anecdotal evidence that although collectors had become more comfortable buying online, the more expensive the artworks were, the keener they tended to be to see them in person.

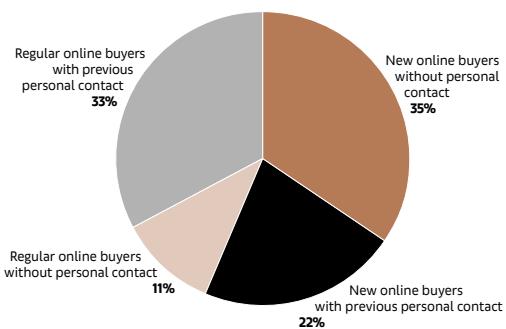
While the segments under \$500,000 also saw a more moderate reduction, mid-size dealers with sales of between \$500,000 and \$1 million continued to see a rise in share. Some dealers in this segment noted that digital sales and strategies were already escalating prior to the pandemic, but had advanced significantly over the last two years as other options diminished. The increased proportion of sales online had been both due to the ramping up of their digital strategies, content, and outreach as well as the increased comfort of consumers buying online without seeing a work of art in person.

While online channels had been an important means for dealers to connect with new buyers, including those in wider geographical regions, the research in 2020 found that with exhibitions, gallery visits, and events cancelled, online outreach and sales also became critical for established clients. In 2019, over half of online sales by dealers (57%) were to new buyers who had never been to their gallery or met the dealer in person. However, this fell to an average of 32% in 2020 as dealers sold most online to existing clients. In 2021, the share to new clients edged up just three percentage points to 35%.

The share of sales made to regular online buyers did not change substantially from 2020 to 2021, increasing slightly to 33% for those buyers who had previous offline contact with the gallery and down slightly for those that did not (to 11%). However, there was a significant decline in sales to new-to-online buyers from dealers' established client bases. In 2020, 31% of dealers' sales were to established clients that were buying from them online for the first time that year. However, this dropped to 22% in 2021 as the pool of people having tried online purchasing grew. Many dealers noted that although some collectors had been reluctant to purchase online before the pandemic, the necessity to do so in 2020 had introduced them to the channel and to the extent that the experience was positive, some were more comfortable doing so in future, for convenience or necessity, even if not for all purchases.

'I wouldn't say that a significant portion of our sales is made online (although yes, it has increased). But expanding our digital presence has been wholly necessary as it helped us reach out to a broader audience, as well as to encourage our clients to become more comfortable with the idea of making decisions without viewing the work in person. While nine out of 10 clients asked to see a work in person before purchasing it pre-pandemic, I'd say that about four out of 10 clients ask to see the work today.'

Figure 2.27 | Share of the Value of Online Sales by Dealers by Buyer Category in 2021



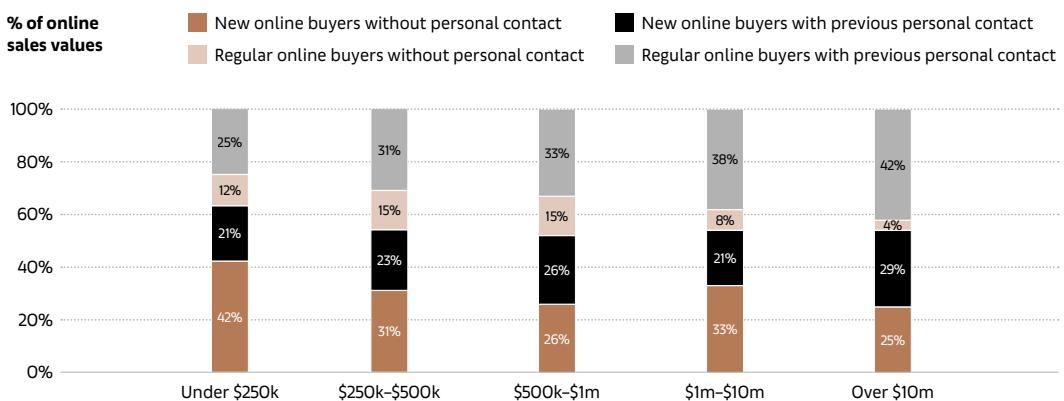
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New online buyers continued to account for a greater portion of online sales by smaller galleries, accounting for 42% of those businesses with turnover of less than \$250,000. This high share can indicate their success at reaching a wider audience, although anecdotally, many dealers from this segment commented that it was a reflection of the difficulties they faced in getting repeat business from online customers, necessitating more sales to new customers. Larger galleries with annual sales of greater than \$10 million focused more on sales to their established clients, although sales to new online buyers rose 7% year-on-year to 25%. This segment of dealers also had a relatively

high share of those being converted to online in 2021, with sales to established but new-to-online buyers making up 29% of their total online sales.

The share of sales made to established buyers who were now buying regularly online increased with the size of the dealers' turnover, which again could reflect the relative ease of larger dealers in maintaining online sales to clients that were comfortable buying from them and familiar with their artists and programs to buy sight unseen on a more regular basis. Dealers also maintained some sales to buyers who regularly only buy online and did not have other contact with the gallery, although, consistent with the last few years, these made up the smallest proportion of sales for dealers at all levels, with an average of 11%.

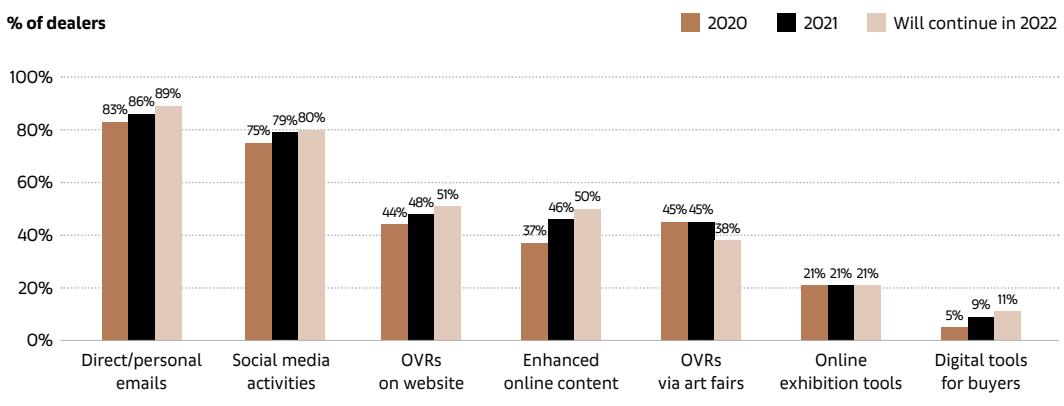
There was a significant decline in the share of sales to established buyers who were new to online (to 22% in 2021) as the pool of people having tried online purchasing grew

Figure 2.28 | Share of Online Sales by Buyer Category and Level of Dealer Turnover in 2021

© Arts Economics (2022)

As their digital programs ramped up over 2020 and 2021, dealers used a range of online strategies to maintain communication with collectors and boost sales. Although there was much discussion and interest in new technologies and improved methods of presenting art online, by far the most widely used online strategy, which was also very popular before the pandemic, was simply reaching out directly to already established collectors via personal emails. Social media activities were also critical and used by almost 80% of dealers in 2021 to promote their artists and encourage sales.

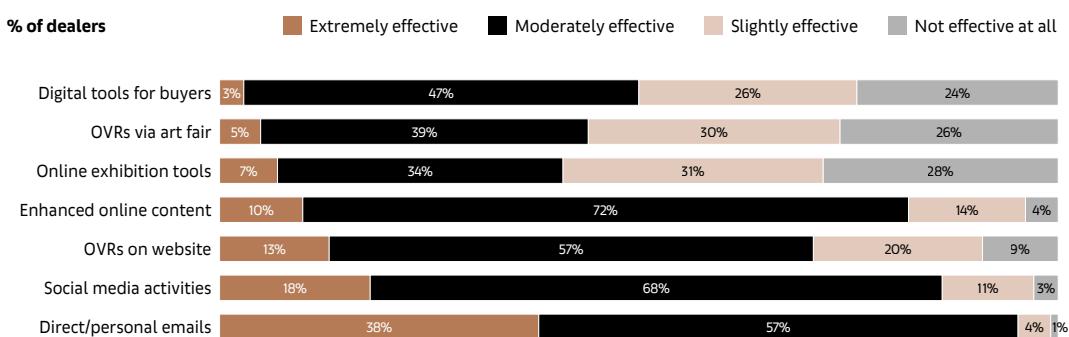
Many dealers continued to improve the content and experience for collectors on their websites or OVRs, including enhancing content through filmed artist interviews, webinars, podcasts, and other editorial content, as well as improving the functionality and ease of transacting through their platforms. Some dealers reported that they had started web shops on their websites for the first time in 2021, allowing collectors to purchase directly and in some cases without any personal communication with the gallery, as their comfort levels buying sight unseen increased. OVRs, which had mainly only been employed by larger galleries and fairs prior to the pandemic, were also used more widely and just under half of the sample (48%) reported using an OVR on their own website in 2021 and 46% had enhanced the content they produced online. While dealers noted anecdotally that their strategies in this area had been ramped up due to the restrictions and challenges posed by the pandemic, many felt that these were inevitable and positive developments and planned to maintain and enhance them in future.

Figure 2.29 | Online Strategies Used by Dealers in 2020, 2021, and Planned for 2022

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As in-person fairs were cancelled in 2020, most offered galleries a virtual alternative through OVRs and these have become a regular part of the experience for collectors and galleries in 2021. As noted above, however, many dealers did not feel that they rivaled the experience (or sales) of live events, and some dealers planned to use them less in 2022, declining from 45% to 38%.

Although there has been continuing interest in new technologies and tools to enhance digital viewing and online collector experiences, online exhibition tools such as virtual reality (VR) or 3D imaging and digital tools for buyers such as augmented reality (AR) were still not widely used in 2021 (only 21% and 9% of the sample respectively). Many dealers noted anecdotally that they simply had not had significant motivation to try them, with some feeling that they did not yet warrant the investment required in their current form. Some dealers were optimistic that technologies in these areas would continue to advance and could become more useful in future. The share planning to incorporate AR and other digital tools for buyers in 2022 increased, but was still a minority at 11%. As noted in the surveys of 2020, it was evident also that costs were likely a factor, with a higher rate of use of VR and other enhanced imaging technologies reported for dealers with higher turnovers. It is notable, however, although just over one third (36%) of dealers in this \$10 million-plus turnover segment reported using exhibition tools such as VR

Figure 2.30 | Most Helpful Online Strategies for Dealers in 2021

© Arts Economics (2022)

in 2020, this proportion fell to 21% in 2021, and those planning to use these tools in 2022 decreased again to 14%, indicating that their use may have been implemented specifically to assist sales and communications during the pandemic. Buyer tools such as AR did not see a large drop-off, increasing from 7% in this segment in 2020 to 14% in both 2021 and planned for 2022, which reflects growing interest and some positive experiences for the small minority of businesses that used them.

Aside from their level of use, dealers were also asked which online strategies had been the most helpful for their business in 2021. The top rated were direct personal emails to existing clients with only 1% of dealers finding them ineffective and 38% rating them extremely effective, followed by social media activities and enhanced content production, which were also indicated as effective by most dealers. A majority (70%) that had used OVRs found their own OVRs moderately or extremely effective and rated them ahead of fair-run platforms. Less than half the sample (44%) rated art fair OVRs as moderately or extremely effective and 26% said they were not effective at all. A relatively high rate of dealers who reported having used online exhibition and digital tools for buyers found them completely ineffective (28% and 24% respectively).

Apart from using their own platforms and tools online, dealers also engaged in collaborative exhibitions and sales. Even prior to the pandemic, discussions on collaborative efforts between dealers were wide-ranging, with businesses focused on how they might work together in producing exhibitions, sharing costs, and making sales. Although many dealers engaged in specific projects regularly with their peers or other institutions, important collaborative models, such as Condo and similar initiatives developed in recent years, challenged the dominance of the event-driven art fair models, and provided access and networking opportunities, especially for smaller galleries, at lower costs and risks. Collaborations with other dealers were generally engaged in to help reduce costs, mutualize potential buyers, and engage in joint marketing as well as to offer support to colleagues or smaller galleries.

The survey showed that just over half (52%) of dealers had engaged in some form of collaboration during 2020 with dealers within their sector in response to the pandemic. This rose to 68% in 2021. A smaller but significant share of 14% collaborated with businesses outside their sector in 2020, and 29% with other institutions such as museums. Both types of collaborations rose by 10% or more in 2021 (to 24% and 41% respectively). There was a slightly higher portion of collaborations between dealers within the same country or region (52%) in 2021 than with overseas peers (41%).

It is interesting to note that when asked specifically about their collaborations with other galleries in presenting exhibitions online, the share was considerably lower: 13% in 2020 and 17% in 2021. But these are expected to continue to grow into 2022, with 21% of respondents reporting they would engage in collaborative exhibitions online in future, after very positive experiences with specific joint efforts such as Galleries Curate, South South, and Italics. For those that did engage in collaborative online exhibitions with other galleries in 2021, the majority (59%) found them moderately effective with an additional 5% finding them extremely effective, and only 15% reported that they were not effective at all for their gallery. Online exhibitions with museums were rated similarly in terms of their effectiveness, and these were also expected to continue to advance in future, with 10% of galleries engaging in collaborations in 2020, 17% in 2021, and 20% expecting to do so in 2022.

While collaborative online exhibitions might have been relatively low in this sample, a higher proportion of 44% of dealers cooperated with their peers online to share information during the pandemic, for example, by communication sharing through email or WhatsApp groups. While some of these collaborative efforts were via dealer associations which were already established

prior to the pandemic, there were also new collaborative ventures formed, with a notable example being the International Galleries Alliance (IGA) which was developed from a less formal WhatsApp group specifically formed to share information and give assistance to peers during 2020. The IGA is a professional collaborative association for galleries designed as an ideas and information-sharing network, with 250 members from the contemporary art market, spanning 53 countries. Its activities include online summits, forums, newsletters, and other information sharing, as well as a proposed autonomous online sales platform owned by its members.

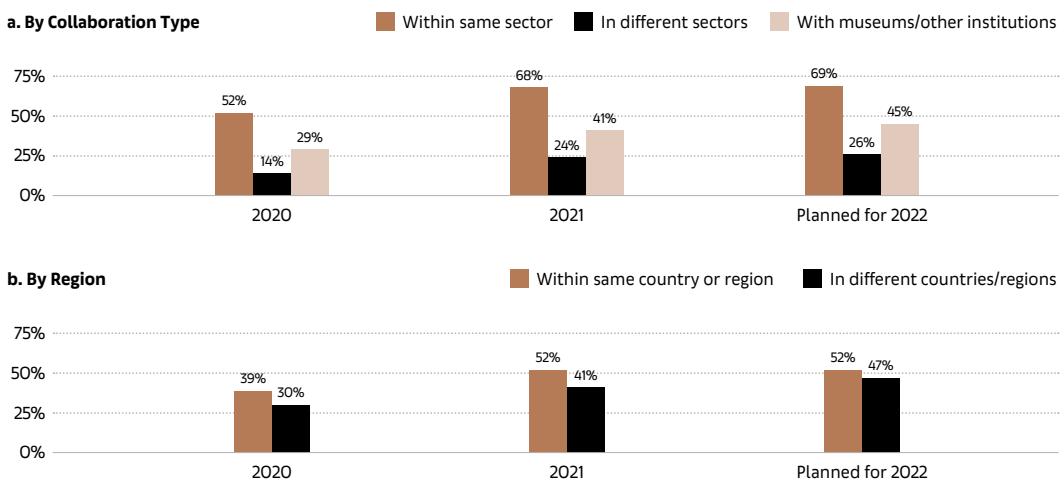
Dealers' opinions were mixed as to the level and depth of collaboration that should occur in practice in future. However, while some collaborative efforts were started due to the pandemic, the evidence suggests that the benefits that have come from some of the initiatives over the last two years will ensure their longevity. Most dealers (76%) found online information-sharing collaborations with peers moderately or extremely effective, with only 4% reporting them as ineffective (and 20% as slightly effective). Looking ahead to 2022, a slightly higher share of 47% of dealers said they would be engaging with online communication sharing through these and other groups. This form of collaboration was also rated higher than joint online exhibitions, with 15% of dealers finding these ineffective in 2021 with another 20% rating them only slightly effective.

Alternative forms of collaboration mentioned by dealers also included working with auction houses (on both sales and purchases), corporate sponsors, media and press organizations, art fairs, gallery associations, curators, designers, hotels, retailers, and charitable organizations, including fundraising drives specifically related to COVID-19.

Online sales show no signs of diminishing in the coming year, despite the hopes of a return to a more normal schedule of in-person events. However, there are indications that some dealers have reached a plateau in terms of the share of sales made through digital channels. When they were asked their views on the growth of online sales for their business over the next 12 months, 56% of dealers felt they would increase, 39% expected them to remain stable, and just 5% anticipated a decline. Although still a majority, those expecting a rise in sales were less than reported at the end of 2020, when 67% of dealers were looking forward to a rise in e-commerce.

Also, in 2020, smaller dealers were the most optimistic about an increase in online sales, whereas at the end of 2021, this was reversed, and just less than half of those with turnover of below \$250,000 expected further expansions via this channel versus 69% of those with turnover of between \$1 million and \$10 million. Regardless of the level of turnover, very few dealers

Figure 2.31 | Share of Dealers Engaged in Online and Offline Collaborations in 2020, 2021, and Planned for 2022



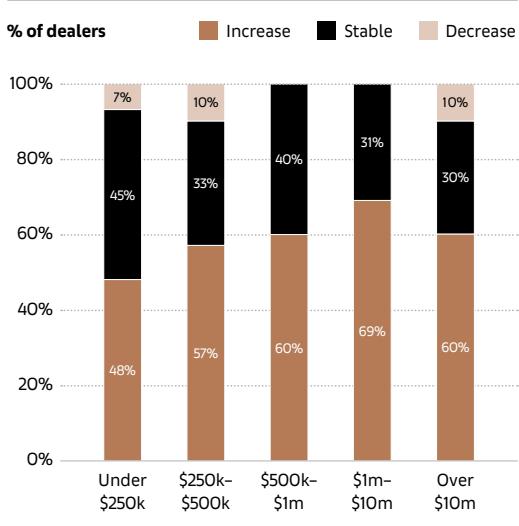
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(10% or less) felt that online sales would diminish, and while nearly all were positive about having returned to more live exhibitions in 2021, most felt that their sales breakdown would not fully revert to the levels of previous pre-pandemic years, with a future of pursuing combined online and offline strategies.

Many businesses invested heavily in improving their digital presence and strategies over the last two years, with the share of spending on IT operations and digital promotions increasing to nearly double the level of 2019. Digital promotions also accounted for a slightly higher proportion of costs than other offline promotions in 2021 (see Figure 2.11). As part of the more permanent shift to a higher level of online sales for many businesses, some dealers have also looked at expanding the digital team within their businesses or engaging with more digital specialists. The surveys indicated that in 2020, 13% of dealers expanded their digital teams as part of their online strategies. However, in 2021, this share doubled to 26% as businesses continued to adapt to a new and higher level of online activity. Just under one third (32%) of dealers reported that they plan to enhance and expand their digital teams in 2022.



Figure 2.32 | Dealers' Outlook for Online Sales in 2022



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2.7 | Outlook for the Dealer Sector

Although the longer-term effects of the pandemic are still unfolding in 2022, many dealers raised concerns that the crisis had intensified the polarized framework of the art market, bolstering the position of the largest businesses who were better equipped to engage with new strategies, and had staff and structures to roll out successful digital programs while, at the same time, also reaping most of the benefits from the return to art fairs and other events. Buyers at the higher end of the market had also become wealthier or at least had more shelter from the economic traumas of COVID-19 than some in other tiers. Some dealers relayed fears that the pandemic had had direct and negative effects on risk taking by both buyers and sellers, with increasingly conservative programs pursued by

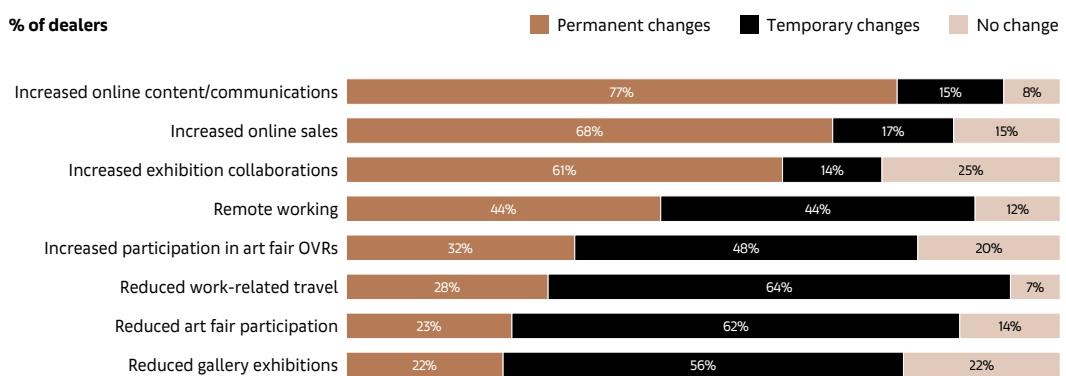
some large galleries and institutions who were forced to focus more on their bottom line and the commercial viability of artists and already established names. Therefore, instead of levelling the playing field as many hoped, the crisis increased the divide between the high and low ends of the market, weakening the position of some smaller galleries and those dealing with emerging or less established artists. Some dealers also feared a more local focus, as businesses and individuals remained present in and focused on their regions, which could potentially further marginalize smaller galleries operating outside of the main art hubs.

Despite significant improvements in 2021, it remained a challenging year for galleries and dealers at all levels. Businesses were faced with trying to balance online and offline strategies and sales in an uncertain and changing context, and without many of the financial supports they had been able to access in 2020. The fallout from the pandemic and the changes in business operations it has brought about has also allowed some dealers time to reflect on and change the priorities of their businesses. While some changes introduced were knee-jerk reactions to the particular circumstances, others are more long-lasting.

As the effects of the pandemic extended through 2021, it became apparent that some of the strategies adopted initially as a means to survive the crisis in the short-term were increasingly becoming more permanent changes in how the sector as a whole operates. Reflecting on some of the bigger changes brought about by the pandemic over the last two years, dealers were asked which ones had affected their businesses and if they felt the changes brought about were temporary changes that would revert to normal as the crisis subsided or if they were more permanent shifts. There was strong consensus among dealers that the shift to digital was not a transitory one, with 77% viewing greater content production and communication with clients as a permanent change and 68% feeling similarly regarding the increase in online sales.

Despite the longevity in the growth of online sales and exhibitions, the reduction in staging exhibitions offline in their galleries and at art fairs during the pandemic was seen only as a temporary change for the majority of dealers, and most expected these would return in future, alongside their online efforts. Just under one quarter (23%) thought they would reduce art fair participation more permanently, with a similar share seeing a reduction in in-person gallery exhibitions. However, views on the future of art fair OVRs were more mixed, with just under one third of dealers seeing their increased participation as a long-term change, while 48% viewed it merely as a short-term reaction to the particular set of circumstances of the last two years.

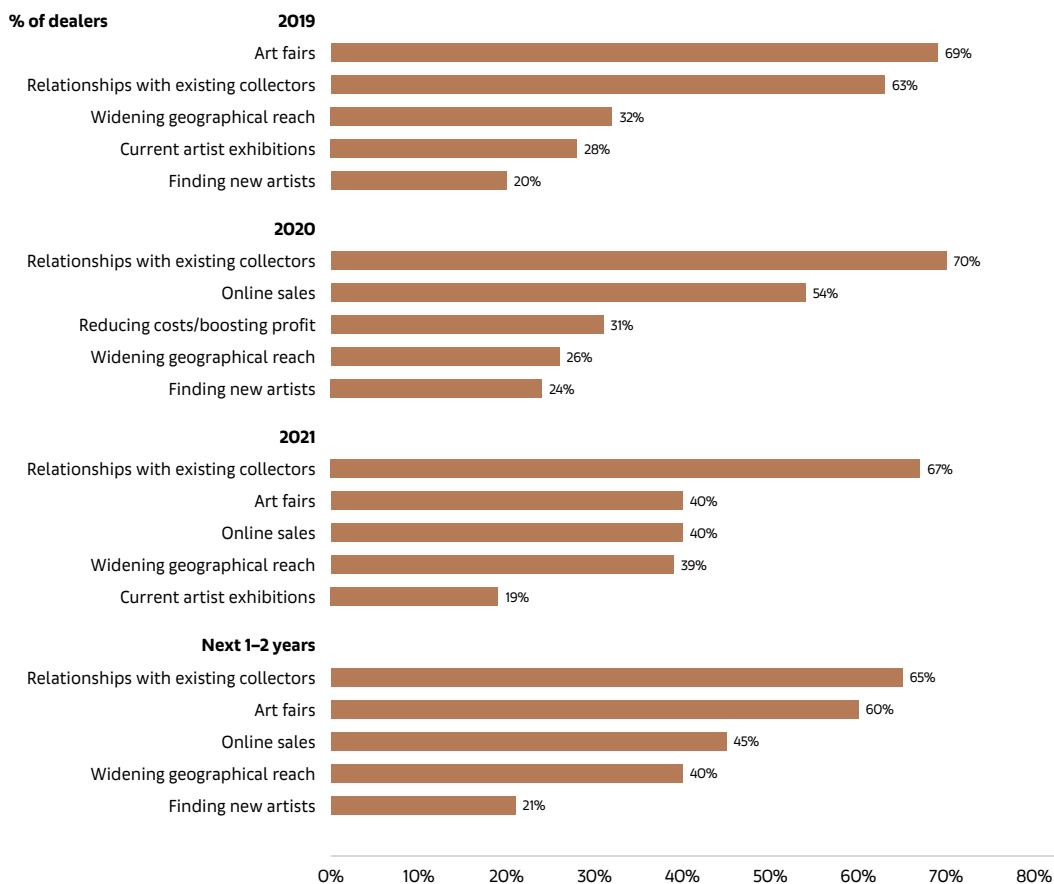
While there was a relatively high 30% of the sample that had not collaborated with other galleries on exhibitions, of the remainder that did, increasing collaborations with peers in their sector was seen as a permanent change by a majority (61%). This was also reflected by dealers anecdotally, who felt collaborative efforts over 2021 had helped to open new connections, gain international visibility for artists, and keep their costs at a feasible level. While most dealers were not planning to abandon fairs, some felt that these collaborative exhibitions also provided a more suitable environment for showing artists, due to the physical environment, flexibility in timing and duration, and the level of engagement or focus of attending visitors. Although this was not a development related to the pandemic, the last two years' restrictions had provided time and incentives to explore these alternatives online and offline.

Figure 2.33 | Dealers' Views on the Permanence of Pandemic-Led Changes

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The pandemic and changing context for sales in the last few years has also forced dealers to reflect on and alter the priorities of their businesses. In 2019, the top three priorities reported by dealers were their art fair exhibitions, maintaining relationships with their existing clients, and widening the geographical reach of their client base.³² These changed significantly in 2020, as businesses shifted their focus from new, more geographically diverse buyers to maintaining existing relationships with their established collectors. As events were cancelled, they also turned away from art fairs and towards trying to boost online sales and exhibitions, while also finding ways to cut costs to maintain profitability. In 2021, while relationships with existing clients were still the number one priority, art fairs came back on the agenda, rating just fractionally ahead of online sales and exhibitions and showing how important both of these areas are to dealers in the current conditions. Looking ahead for the next one to two years, these top priorities remained relatively stable with dealers also seeking to widen their client base and find new artists.

³² The top priorities are those with the highest share of dealers assigning them as within their top three priorities for the year, from a list of choices of 12 to 15 options each year.

Figure 2.34 | Top Five Business Priorities for Dealers 2019–2023

Auctions

3



Key Findings

Auctions

- 1.** After a challenging year in 2020, the auction sector rebounded strongly in 2021, with strong sales both online and offline, particularly at the high end of the market, as well as an influx of new buyers. Sales at public auction of fine and decorative art and antiques reached an estimated \$26.3 billion, an increase of 47% on 2020.
- 2.** In 2021, even with a fuller live auction calendar, private sales also continued to flourish, increasing by 32% to an estimated \$4.1 billion, including \$3.0 billion reported by Christie's and Sotheby's. Total sales conducted by auction companies, including both public and private sales, were estimated to have reached \$30.4 billion in 2021, up by 45% on 2020 and 10% on 2019.
- 3.** The largest international auction hubs remained the US, China, and the UK, with a dominant share of 78% of public auction sales by value. China was the largest market with a 33% share (down by 3% year-on-year), marginally ahead of the US (32%).
- 4.** NFT sales entered the auction sector, but at limited values so far. Christie's NFT sales totaled \$150 million in 2021, including the landmark sale of Beeple's *Everydays: The First 5000 Days* (2021) for \$69.3 million in March. Sotheby's NFT sales reached \$80 million. Only 5% of the second-tier auction houses surveyed had sold NFTs in 2021, although 28% had not but were planning to do so in the next one to two years.

Auctions

5. Post-War and Contemporary art maintained its position as the largest sector of the fine art auction market in 2021, with a share of 55% of the value of global fine art auction sales.

Sales totaled \$6.7 billion, up by 42% year-on-year. Within the sector, sales of works created in the last 20 years reached \$2.5 billion at auction, more than doubling in value from 2020.

6. Modern art was the second-largest sector by value in the fine art auction market in 2021, with a share of 22%. Sales improved in 2021, increasing by 23% in value to \$2.7 billion.

These sales included the highest-selling lot of the year, Picasso's *Femme Assise près d'une Fenêtre (Marie-Thérèse)* (1932) for \$103.4 million at Christie's New York.

7. Sales of Impressionist and Post-Impressionist art accounted for 15% of the value of sales in the fine art auction market. Sales recovered strongly in 2021, with a bounce-back to 2019 levels as the market doubled in value year-on-year to \$1.8 billion.

8. The Old Masters sector represented 8% of the value of global fine art auction sales, of which 4% was sales of European Old Masters. After four consecutive years of declining values, sales of all Old Masters works increased by 21% in 2021 to \$917 million, while European Old Masters sales rose by 65% to \$464 million, driven by a small number of highly priced lots.

3.1 | Auction Sales in 2021

After a very challenging year in 2020, the auction sector rebounded strongly in 2021, with high demand and strong sales both online and offline, particularly at the top end of the market. Sales at public auction of fine and decorative art and antiques (excluding auction house private sales) reached an estimated \$26.3 billion, an increase of 47% on 2020. In 2020, sales had fallen to a decade low of just under \$17.9 billion as the COVID-19 pandemic imposed restrictions on auction house operations which altered the frequency and format of sales. Vendors also considered it a poor time to sell despite evidence of demand and the existence of willing buyers. After two years of growth from 2016 to 2018, 2020 was the second year of decreasing values bringing the market to the lowest point in a decade, just below the level in 2009 when the market fell to \$18.3 billion in the aftermath of the global financial crisis. Just like the rapid recovery in 2010, the bounce-back in sales in 2021 restored values, with sales exceeding both 2020 and 2019. While much of the increase in values was driven by the supply of high-quality works coming onto the market, an influx of new buyers in 2021 was also an important factor supporting reviving sales.

Sales at public auction of fine and decorative art and antiques reached an estimated \$26.3 billion, an increase of 47% on 2020

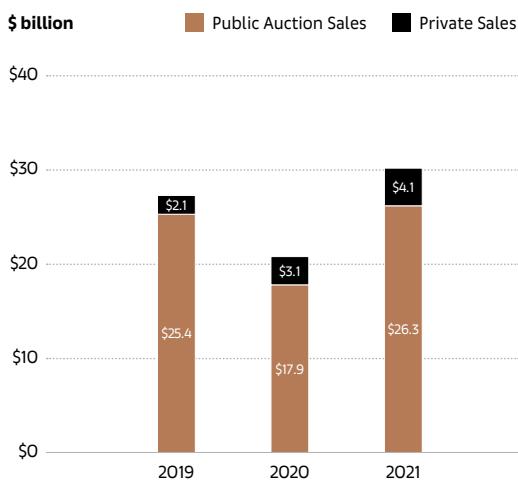
A notable trend over the last two years has been the increase in private sales through auction houses. These are generally perceived as lower risk in a declining market, since prices and failures to sell are not publicized. Private sales advanced by 36% to \$3.1 billion in 2020, boosted also by postponed or reduced public auction schedules. However, even in 2021 as the auction calendar was much fuller, private sales continued to flourish, increasing by 32% to an estimated \$4.1 billion, including \$3.0 billion reported by the two leading auction houses of Christie's and Sotheby's. Total sales conducted by auction companies, including both public and private sales, were estimated to have reached \$30.4 billion in 2021, up 45% on 2020 and 10% on 2019.

The top-selling lots of the year at auction were for the most established artists in the Modern and Post-War and Contemporary sectors, including Picasso's *Femme Assise près d'une Fenêtre (Marie-Thérèse)* (1932) for \$103.4 million, and Jean-Michel Basquiat's *In This Case* (1983) for \$93.1 million (both sold in New York).

However, an Old Master work was also in the top three, with Sandro Botticelli's *Portrait of a Young Man Holding a Roundel* (1444/5 – 1510) selling for \$92.2 million. As discussed in Chapter 1, the sale of Beeple's *Everydays: The First 5000 Days* (2021) for \$69.3 million at Christie's in June was also a notable sale, showing the importance of newly created works and particularly NFTs, and breaking a record for digital art. Aside from this, many NFT works made by collectives in multiples such as Larva Labs' *CryptoPunks* and Yuga Labs' *Bored Apes Yacht Club* also sold at the larger auction houses, confirming the increasing demand for NFTs on the secondary auction market and sparking debates as to how an artwork can be defined.³³

While online-only auctions continued to be successful for many auction houses as the move to a digitally driven industry has become more mainstream, the format of live-streamed auction sales were among the most successful of the year. Examples such as the sale of the Macklowe Collection at Sotheby's which totaled just over \$676 million, in a traditional live sale, live-streamed around the world, reinforced the importance of the supply-driven nature of this sector and its ability to reach global collectors through online bidding. While these live-streamed sales accounted for some of the most valuable sales of the year, most of the winning bids occurred outside of the live event itself by phone or online, a trend already evident prior to the pandemic, and one which made the switch to online for the auction sector in the last two years less of a transformation than in the dealer and art fair sectors. Many high-value sales (including this collection) were also

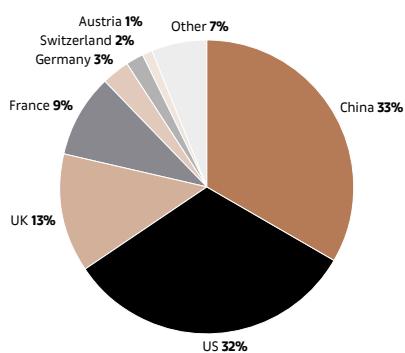
Figure 3.1 | Global Auction Sales 2019–2021



© Arts Economics (2022) with data from auction houses, Artrory, AMMA, and other sources

³³ See for example, Bastian, R (2022) "How Wikipedia's Classification of NFTs as 'Not Art' Impacts Equity in The Art World." *Forbes*, available at [forbes.com/sites/rebekahbastian/2022/01/16/how-wikipedias-classification-of-nfts-as-not-art-impacts-equity-in-the-art-world/](https://www.forbes.com/sites/rebekahbastian/2022/01/16/how-wikipedias-classification-of-nfts-as-not-art-impacts-equity-in-the-art-world/).

Figure 3.2 | Global Public Auction Market Share by Value in 2021*



© Arts Economics (2022) with data from Artory, AMMA, and other sources

* Excludes private sales by auction houses

markets, falling 11% (to \$6.3 billion), and the advance in 2021 meant that values were 24% above their 2019 level. The greatest share of sales by value took place in Mainland China (68% of the total), but there was growth across all regions and categories. Sales in ceramics and other wares (which accounted for one third of the market by value) and oil painting and contemporary art (22%) both rose in value by almost 50% in US dollar terms. The largest sector, Chinese painting and calligraphy (which made up 43% of the market), also saw a substantial increase of 33%. While lots at the very highest end of the market selling for over 100 million RMB (around \$15 million) declined by 16% year-on-year, the number of works sold for over 10 million RMB (\$1.5 million) grew by 27%, and the number of transactions across all levels grew by 50%, with strong demand across a range of prices. Part of this growth was due to an increase in the number of businesses operating in the sector, with the Chinese Auctioneers Association (CAA) reporting an increase in licensed art auction houses of 4% year-on-year in 2020, some of which had significant sales already in 2021, including Yongle Auction Company, relaunched in 2020, and Cuppar Auction, founded in 2020, specializing in cultural relics and works of art.

guaranteed by third parties with irrevocable bids continuing to be a strong feature of high-end sales and growing competition between third parties to buy out guarantees.

The largest international auction hubs remained the US, China, and the UK, with a dominant share of 78% of public auction sales by value. China was marginally ahead of the US with 33% (down by 3% year-on-year) with the US up by 3% to 32%.

China, including Mainland China and Hong Kong SAR (China), saw a strong recovery with sales up by 39% to \$8.8 billion. Sales contracted less in China in 2020 than in some other leading

Despite the buoyancy of the market in 2021, the auction sector in China still has a number of persistent issues, including a very high rate of buy-ins, with 49% of works offered at auction remaining unsold, stable on 2020. The problem of late payment and non-payment at auction has also remained a feature of the market. While the figures published by the CAA in 2020 saw signs of improvement, this regressed again in 2021 (see below).

After a decline of 46% in 2020 to just over \$5 billion, sales in the US recovered strongly in 2021, increasing by almost 70% to \$8.5 billion. Aggregate values were driven by strong sales at the high end of the market. A key factor driving the dominance of the US as a global hub is its primary location for sales of the highest-priced art in the world, which was again the case in 2021. Most sales of multimillion-dollar art at auction took place in New York, including all of the top 10 lots sold during the year. Despite the growth of markets in Asia, more than half of the sales by value in the major international auction houses of Christie's, Sotheby's, and Phillips were based there in 2021.

Sales in the third-largest market, the UK, also increased year-on-year in 2021, but by a more modest 23% to just under \$3.5 billion. The UK's global share declined to 13% (from 16% in 2020 and 18% in 2019). Sales values had fallen in the UK by almost 30% in 2020, and hence the recovery in 2021 still left them 12% below the levels of 2019 (just under \$4 billion). Elsewhere in Europe, sales in France saw a particularly strong uplift of just over 60% reaching \$2.2 billion, 28% higher than pre-pandemic 2019 and bringing the market's global share up from 6% to 9%.

The volume of lots also increased in 2021, but not by as much as values. Focusing only on fine art auctions, the number of lots sold increased 12% year-on-year, but after a 15% fall in 2020, volumes were still below their 2019 level.³⁴ The three largest global markets made up just under half of these transactions, with volumes much less concentrated than values. The US and China both had an equal share of fine art lots sold (20% each) with 9% of transactions in the UK and 10% in France.

³⁴ Changes in the volume of aggregate auction sales are often less conclusive indicators of market performance than trends in values, with many auction houses selling large volumes of decorative art and collectibles that can vary widely over time as well as between different sale types and regions. To compare the lots sold across countries on a consistent basis, fine art auctions offer a clearer benchmark.

Top-Tier Auction Houses

The top-tier auction houses all rebounded strongly in 2021, with high-quality supply and ample demand, including an influx of new buyers, boosting public and private sales. The top-tier auction houses such as Christie's, Sotheby's, and Phillips continued to introduce new timing and formats to the auction calendar, and invested substantially in the quality and delivery of live-streamed and online-only auction platforms. These new formats proved to be a key success factor that allowed flexibility in the continuing uncertainty of pandemic-driven restrictions on live events. They also had a significant impact on the traditional auction calendar, enabling a more continuous, year-round schedule rather than the traditional seasonal cycle of sales.

Values in the auction market continued to be highly concentrated among these top houses, with the top five auction houses accounting for more than half of the value of global public auction sales in 2021. At Christie's, Sotheby's, and Phillips, the share of fine art sales has increased by value over time, including close to 80% of total sales in 2021. In the major auction houses in China, decorative art and antiques represented a larger share, although fine art sales have advanced for the last two years from 59% in 2019 to over 65% in 2021.

At Sotheby's, aggregate sales reached \$7.3 billion including sales through all public and private channels, an increase of 46% from just over \$5 billion in 2020. This exceeded 2019 (\$5.8 billion) and also represented the highest-ever total in the company's history. Public auction sales (including online and offline) totaled \$5.9 billion, up almost 70% from 2020 (\$3.5 billion). Although live sales resumed, online-only sales continued to thrive increasing 46% year-on-year to \$850 million.

The hybrid live-stream auction format was highly successful, combining live sales with active online bidding. Sotheby's reported over 16.6 million live-stream views in 2021, which helped to substantially expand their reach to new buyers, with 39% of buyers and 44% of bidders new to Sotheby's in 2021.

Catering to the rapid expansion in interest in NFTs, Sotheby's launched Metaverse, a Web3 enabled NFT marketplace, along with the virtual gallery in Decentraland to exhibit NFTs. The company held its first NFT sale in April 2021, in collaboration with the digital artist PAK, which achieved \$16.8 million. In total, NFT sales reached \$80 million in 2021, and included a record for a single *CryptoPunk* (\$11.8 million) and for a single *Bored Ape Yacht Club* (\$3.4 million). These sales were also successful in attracting young and new buyers, with 78% of NFT bidders being new to Sotheby's and more than half of them aged under 40.

While US buyers still accounted for the largest share of sales made in 2021, Asian collectors made up one third of all bids by value worldwide and almost half (46%) of the bid-on or bought lots over \$5 million. Besides sales in Hong Kong SAR (China), 20% of the bids in New York were also by Asian buyers, and they were behind the purchases of many of the highest-priced Impressionist, Modern, and contemporary works. Sotheby's also further expanded its global presence, opening a new German headquarters in Cologne in 2021.

Although Sotheby's continued to expand into a range of collectibles (luxury sales were up almost 80% in 2021), fine art still dominated, with a record year for Modern and contemporary sales (\$4.3 billion, including many items from the Macklowe Sale mentioned above) and the highest level of sales for Old Master paintings in 10 years.

Private sales reached \$1.3 billion, down 13% on 2020, but still greater than 2019, and representing around 18% of the company's total revenue (versus 30% in 2020). The company also reported that buyers through this channel were up by 42% on pre-pandemic 2019.

Christie's reported an equally strong year with total global sales through all channels of \$7.1 billion, up by 61% from \$4.4 billion for 2020, and also exceeding their 2019 total (\$5.8 billion). Aggregate public auction sales reached \$5.4 billion, up by 74% on 2020's total of \$3.1 billion. Within these sales, online-only auctions continued to gain in value, increasing 48% year-on-year to \$445 million. Almost two thirds of new buyers came from online channels, and 35% of the buyers at auction in 2021 were new, including one third who were millennials.

Fine art accounted for most of the value of sales, with particular strength at the high end of the market. Christie's sold the two highest-priced lots of the year: Picasso's *Femme Assise près d'une Fenêtre (Marie-Thérèse)* (1932) for \$103.4 million and Jean-Michel Basquiat's *In This Case* (1983) for \$93.1 million (both sold in New York).

Christie's also expanded the range of goods sold, with a boom in luxury goods (up 153% in value from 2020 to \$908 million). They also entered NFT sales, selling more than 100 at auction with values sold totaling \$150 million. These included what is now seen as the landmark sale in the sector of Beeple's *Everydays: The First 5000 Days* (2021) for \$69.3 million in March. NFT sales brought an injection of both new and young collectors to their auction sales, with 75% of NFT buyers being new to Christie's, and an average age of 42 years.

As in 2020, Christie's sales were globally diversified, with the highest share of their sales to US buyers (35%, up by 2% year-on-year), 34% to buyers in Europe, the Middle East and Africa, and 31% to those in Asia (down by 2%).

Christie's private sales increased for a fourth consecutive year to \$1.7 billion, up 30% compared to 2020's \$1.4 billion and more than double the level in 2019. Due to the even greater increase in public auction sales, private sales accounted for a slightly smaller portion of the company's gross revenues in 2021 (24% versus 30% in 2020), but were still a substantially higher share than in 2019 (15%).

Phillips achieved sales of \$1.2 billion through all channels, up 58% year-on-year, 32% higher than 2019 and exceeding their historic peak of \$916 million in 2018. Public auction sales reached \$993 million, up 52% on 2020, while private sales were reported at over \$265 million, more than double their level in 2020.

Phillips continued its expansion in Asia, with total sales in Hong Kong SAR (China) reaching \$270 million, up 77% on 2020, their highest total since they entered the Asian market five years ago. Phillips held multiple Asian sales in 2021 in collaboration with Poly Auction in Hong Kong SAR (China), including the joint November sale of contemporary and Modern art totaling \$58.2 million.

Their online-only sales grew 68% year-on-year, and have advanced over 400% since 2019. Phillips also engaged new audiences through NFT sales, with 88% of the bidders in Phillips' first NFT auction in 2021 being new to the company. Their debut sale in April included *REPLICATOR* (2021), by Canadian digital artist Mad Dog Jones for \$4.1 million. New buyers also came through other channels, and half of their buyers at all sales (online and offline) were new to Phillips in 2021.

Poly Auction, the largest auction house in China, reported public auction sales of \$1.8 billion, up by over 70% from 2020, exceeding the \$1.4 billion reported in 2019. The majority (81%) of their sales by value were in Mainland China (primarily Beijing), with those in Hong Kong SAR (China) accounting for 19%. China Guardian recorded sales of \$1.0 billion, up 34% on 2020 and 46% on 2019. 88% of their sales by value in 2021 took place in Beijing, with the remaining 12% in Hong Kong SAR (China) (from 9% in 2020). The relative newcomer Yongle Auction Company (relaunched for operations in 2020) saw sales increase by 42% year-on-year to reach \$511 million. Other major companies in China included Holly International and Sungari with combined sales of close to \$930 million in 2021. Holly International's sales rose by one third in 2021 (to \$543 million), while Sungari's doubled (to \$386 million).

A recurrent problem in China that resurfaced in 2021 was that some of the larger companies still have significant issues with late payments and recovering debt. According to data from the CAA in 2021, from a sample of auction houses with lots sold for over 10 million RMB (around \$1.5 million), the number of unpaid lots rose from 64 to 181, almost double the rate of the previous year (from 31% of the sample to 59%). The reasons for lots not being fully paid were varied, but indicate the flexible payment arrangements extended by some auction houses to buyers in China.

Clearing rates varied by sector, from only 27% in ceramics and other wares to 44% for modern Chinese ink paintings and calligraphy. As noted in previous reports, although late and non-payment at auction is not unique to China, its persistence there is notable, and it implies that the sales figures quoted for China include a significant and varying portion of works where payments remain outstanding. The CAA has also reported that these issues are particularly apparent in some of the newer auction houses. In a sample of 41 lots sold for over 10 million RMB at Yongle Auction Company, 33 (or 80%) were not completely cleared in the given period, a non-payment rate second only to Poly Auction. These rates also potentially affect the rankings of auction houses in China. While Poly Auction reported the highest sales in 2021, the CAA data suggests that China Guardian was ahead in terms of the amount of commission received and total corporate tax generation because of their higher share of more fully cleared lots.

Chinese auction houses are not permitted under the laws of Mainland China to conduct private sales or 'non-auction sales', although some companies have set up separate legal entities to conduct business outside of the auction sector and some conduct private sales through their branches in Hong Kong SAR (China) or elsewhere. The extent to which private sales occur at either of these major houses is therefore not included in their annual reporting.

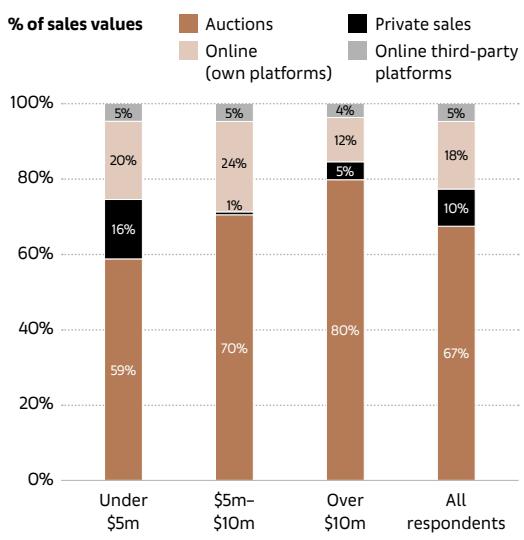
Second-Tier Auction Houses

Although overall values in the auction sector are very concentrated in the top-tier auction houses, there are more than 500 medium to large second-tier businesses that also generate substantial sales, dominating in their own domestic markets but also engaging with international buyers and sellers.³⁵

A survey of second-tier auction houses in 2021 by Arts Economics showed that within the sample of around 100 businesses, the majority (63%) saw an increase in sales, 26% were stable, and 11% experienced a decline. While businesses had had a challenging year in 2020, the sector was generally ahead of dealers in terms of switching to online sales, and many were able to maintain these successfully, both via their own- and third-party platforms. The drop in sales in 2020 was mainly due to the negative effects of the pandemic on supply and vendor risk aversion, as well as practical and logistical problems related to pandemic-based restrictions on live sales, such as limits on presale viewings and transport, shipping, and travel problems, which were resolved to a large extent during 2021.

The second-tier houses reported that live or public auction sales accounted for 67% of their total sales in 2021, relatively stable on 2020, although the share was dependent on size, with smaller businesses having a significantly lower proportion of public auction sales. Online-only auction sales accounted for 23% of sales, down from 30% reported in 2020, but higher than in 2019 (19%).

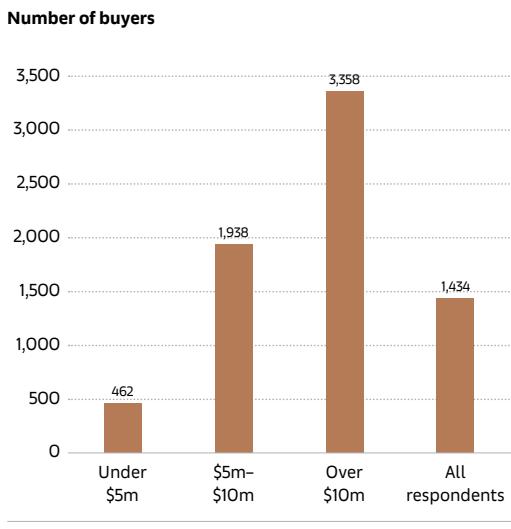
Figure 3.3 | Second-Tier Auction House Share of Sales by Sales Channel in 2021



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³⁵ The sector also includes third-tier auction houses, which are smaller businesses in domestic markets that tend to specialize in their own national art and related areas. There are also many auction houses that regularly sell art alongside other property, such as real estate, cars, and collectibles.

**Figure 3.4 | Number of Buyers in 2021
by Second-Tier Auction House Turnover Level**



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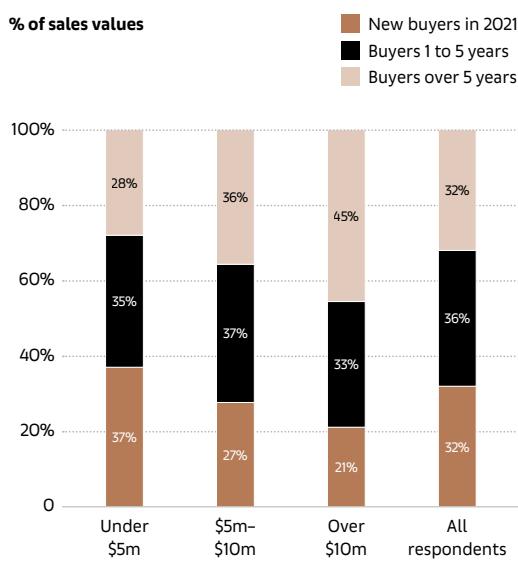
Private selling remained relatively low for this segment, making up a 10% share over all respondents. It was notable that this was 5% or less for businesses turning over more than \$5 million per year, while the smallest businesses in the sample reported the highest share (16%). One reason for this larger share is that some of these smaller businesses account for lots that are unsold at auction but sold at some point during the year through their salerooms directly to private clients as private sales. Some businesses also noted that they had successfully introduced the possibility of buying directly from their website (with a buy-now function). Although these were online sales, they were not conducted via an auction, and sold directly to private clients, and therefore classified as private sales in Figure 3.3.

Second-tier auction houses were also successful in reaching new buyers in 2021, and, in contrast to the dealer sector, the average number of buyers they dealt with rose by 14% to 1,434 (from an average of 1,260 reported in 2020), with the number of buyers rising with the level of sales turnover. While the top-tier auction houses sell to an international client base over multinational salesrooms, auction houses in this sector tend to deal predominantly with local buyers (74% of their total number, stable on 2020). They also made a majority of their sales by value in 2020 to local buyers within the country where their business was based (68%), with this share remaining relatively stable since 2019 despite the many changes in the market.

On average across second-tier auction houses, 32% of sales were to new buyers in 2021, an increase in share of 5% on 2020 and 10% on 2019.³⁶ The share to long-term buyers (of over five years) dropped 1% to 32%, with the remaining 36% to buyers that they had been dealing with for one to five years (also down 4%). New buyers were especially important for smaller auction houses (with turnover of less than \$5 million), representing 37% of the sales, versus 21% for those at the higher end, where long-term buyers were more significant.

It is notable that NFTs had much less of an impact on second-tier businesses versus those in the top tier. Only 5% of respondents had sold NFTs in 2021, although 28% had not but were planning to do so in the next one to two years. Of the remainder, 38% were unsure of whether they would sell them in future and 28% had not sold any and did not plan to in future either.

Figure 3.5 | Share of Second-Tier Auction House Sales to Buyers by Purchase History in 2021

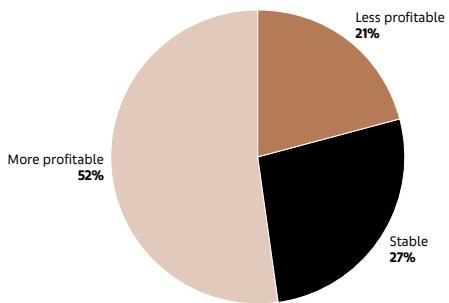


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On average across second-tier auction houses, 32% of sales were to new buyers in 2021, an increase in share of 5% on 2020 and 10% on 2019

³⁶ While this may be due to the success of businesses reaching new audiences, it may be partially influenced by the specific sample, which contained a larger number of younger businesses than in 2020, with an average years in business of 29 (versus 40 in the sample of 2020).

Figure 3.6 | Change in Net Profits for Second-Tier Auction Houses 2021 versus 2020



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Although many experts working in this sector had noted that it had been a particularly strenuous year, with few breaks in the calendar and a continuous push to secure vendors, these efforts had allowed many businesses to maintain or increase their profitability. Considering the changes in both their costs and sales in 2021, just over half (52%) of second-tier auction houses reported being more profitable in 2021 than in 2020, including 21% that had significantly higher profits. A further 27% said there had been no change in their net profitability and a minority of 21% were less profitable year-on-year.

In 2021, just over half (52%) of second-tier auction houses reported being more profitable in 2021 than in 2020, including 21% that had significantly higher profits



3.2 | Online Auction Sales

One of the factors adding to the very rapid recovery of auction sales in 2021 was the continued increase of sales through online channels. While 2020 was remarkable due to the dramatic shift upwards in the number and value of online-only sales in the sector, many auction houses continued to increase the volume of sales in this format throughout 2021, while at the same time returning to a fuller program of live sales. Some of the most successful live sales were conducted via the hybrid live-streaming format, which although not new, was substantially improved in terms of the quality of production and technical efficiency, and it was more widely used across the sector in 2021.

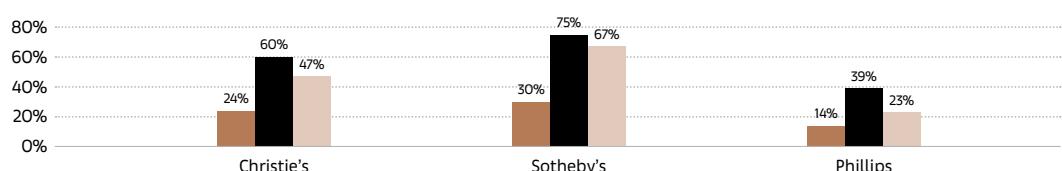
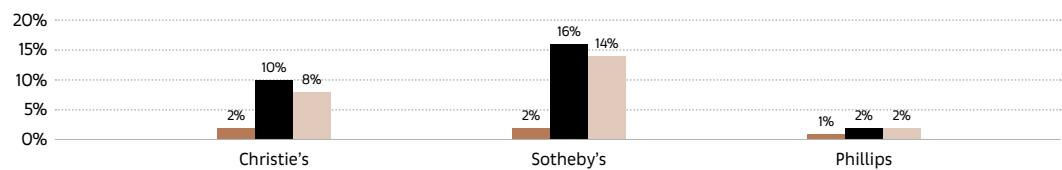
Top-Tier Auction Houses

While all of the larger auction houses had already engaged significantly in online-only sales prior to the COVID-19 pandemic, the break in the regular schedule led to a dramatic increase in both the number of these sales and their value in 2020. In 2021, despite the resumption of live sales, these did not revert to pre-pandemic values and have settled on a more permanent, higher level.

Aggregating the online-only sales of Sotheby's, Christie's, and Phillips, values increased to five times their size in 2020, with their share of total sales increasing from less than 2% in 2019 to more than 12% in 2020. In 2021, they continued to increase in value, with a combined total of \$1.3 billion, representing a 47% increase year-on-year from 2020, as well as an eightfold advance in size from 2019 (from less than \$170 million). As live sales also expanded particularly strongly during the year, the share of online-only sales by value dropped only slightly to 11%, still significantly above 2019.

Apart from increasing values through online channels, Figure 3.10 illustrates how these sales have come to dominate the auction calendars of major auction houses. While the three leading global houses held just over 220 online-only sales in 2019, this expanded to more than 650 in 2020. The number moderated in 2021 (to 545) but it still represented twice as many as pre-pandemic times and accounted for the majority of sales that took place (57%) versus only 26% in 2019. This increased number of online sales, along with their longer durations, created a more continuous and year-round schedule of auctions. The length of online sales in 2021 ranged from one to 31 days with an average length of 12. The average length of sale varied in each business:

- Christie's averaged the longest at 15 days;
- Sotheby's averaged 11 days; and
- Phillips averaged nine days.

Figure 3.7 | Increase in Share of Online-Only Sales: Sotheby's, Christie's, and Phillips 2019–2021**a. Number of Sales****b. Value of Sales**

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Sotheby's online sales reached a reported \$850 million in 2021, their highest level to date and a rise of 46% from \$584 million in 2020. Online-only sales had been steadily rising before the pandemic but had only reached \$77 million in 2019, contributing less than 2% to the company's overall public auction sales. In 2021, by contrast, online-only sales made up 14% of total public auction sales by value, stable on 2020 despite the resumption of a fuller calendar of live events, and just over two-thirds of all auction sales held during the year (373 sales). As noted above, NFT sales were a new addition to their online sales, and these achieved some of the highest prices in online-only auctions, including *101 Bored Ape Yacht Club* NFTs for \$24.4 million. Besides online-only sales, Sotheby's also expanded its live-streaming capabilities for live auctions as well as online bidding, which accounted for 92% of all the bids that took place in 2021.

Christie's online-only sales reached \$445 million, also their highest-ever total. After a rise of over 260% to \$305 million in 2020, values continued to grow in 2021 increasing by 46% year-on-year, and to more than five times the level of 2019 (at just under \$85 million).

Christie's held 154 online-only sales, down by around 50 on 2020, but a significant expansion from 2019 (85) and over three times the number in 2013 (50). Online-only auctions accounted for close to half of Christie's auctions in 2021. Their share of public sales by value was 8%, down slightly from 10% in 2020, but four times the level of 2019 (at 2%). The value of lots being sold online also advanced, with an average lot price of \$23,400 versus \$6,100 in 2017, and there was increase of 56% in the number of bids in online-only sales for prices of over \$100,000 in 2021. The sale of Beeple's *Everydays: The First 5000 Days* (2021) for \$69.3 million was a record price for any single lot sold in an online-only sale and an NFT sold at an auction house, as well as the third-highest price for any living artist's work sold at auction, and one of the most referenced sales in the discussions around NFTs and their place in the art market.

Phillips also increased its online-only sales over the pandemic, tripling in number from 10 to 30 in 2020. While these decreased to 19 sales in 2021, values continued to rise reaching \$19.2 million, an advance of close to 80% from 2020 (\$10.7 million) and more than 400% over 2019 when there were just 10 online-only sales in their schedule. Nonetheless, online sales accounted for a relatively small share of their total sales (at 2%, stable year-on-year), with values rising in tandem with stronger live sales. While online-only sales are still a relatively small share, online bidding also continued to expand, with half of all lots sold at Phillips at live sales going to online buyers (from less than one third in 2019).

It is notable that outside of these top-tier multinational companies, other large regional auction houses have taken different approaches. Including fine art, decorative art, and a range of collectibles, in the US, Heritage Auctions has consistently had the highest level of online-only sales in the sector. In 2021, these reached \$903 million, up 69% from \$532 million in 2020, and \$483 million in 2019. Online-only sales have consistently accounted for the majority of the sales at Heritage Auctions, and they accounted for 63% of total sales in 2021, up 5% year-on-year, with some of their strongest online sales in the collectibles sectors, including historical collectibles, coins, and comics.³⁷

In China, the top-tier and some mid-tier auction houses also conducted online sales, although these made up a small portion of their aggregate turnover in recent years. The COVID-19 pandemic encouraged some businesses to expand their online schedules, and due to the dominance of mobile technology for accessing online within China, many developed WeChat Mini programs on their websites, which have become the most widely used platforms for online auctions and bidding.

³⁷ Heritage Auctions total sales reached \$1.4 billion, up 63% on 2020. Heritage's sales are focused largely on the antiques and collectibles categories, with some outside the remit of this report. Some of Heritage's strongest online sales were in the collectibles sectors, including historical collectibles and coins, with numismatics reaching \$434 million and comic books and art totaling \$181 million in 2021. Their private sales also reached a record high of \$400 million, up 70% year-on-year (from \$235 million in 2020).

Due to the rapid development of the sector, data on online-only sales at all auction houses in China is still not available consistently from a central source. However, based on the reported results taken directly from the top eight auction houses in Mainland China and Hong Kong SAR (China) in 2021, online-only sales reached around \$240 million. If collectibles and other items are included, this figure is likely to be significantly higher and a huge amount of trading in art online occurs in China on platforms such as Yitiao rather than in the traditional auction houses.

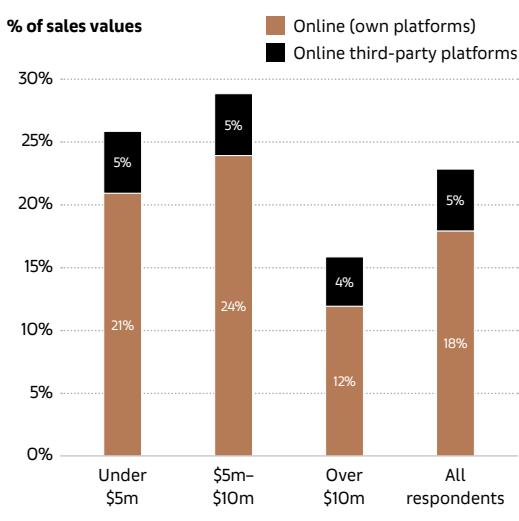
Poly Auction held 134 online-only auctions in 2021, up from 87 in 2020, generating just over \$23 million. China Guardian also held 300, up from 183 in 2020, totaling \$31 million. Besides online-only auctions, both of these leading businesses saw a massive increase in online bidding. Poly Auction reported that the number of collectors bidding online in their Hong Kong SAR (China) Spring and Fall auctions rose over 500% compared to 2020, while China Guardian saw a rise of over 110% in Greater China. It is likely therefore that these major auction houses will offer a greater digital component to their sales in coming years. Other larger auction houses including Cuppar International, Holly International, and Yongle Auction Company generated a combined \$47 million in online-only sales.

Second-Tier Auction Houses

Online sales have been an important channel for second-tier auction houses for some time, allowing operating efficiencies and reduced costs with wider geographical reach. The rising costs of renting and operating physical premises and the other operating costs of live sales, combined with advances in viewing and bidding technologies have encouraged small and mid-sized auction houses to increase the online component of their sales, either through their own internal platforms or in combination with third-party platforms or aggregators to conduct or facilitate sales on their behalf.

Many such businesses had already expanded into digital channels before the pandemic and therefore found it much easier to switch to a greater share of online-only sales. Some reported booming sales despite the difficult context of the last two years, as live-streaming and online-only auctions reached new and expanded audiences, including those who may have never attended a live sale. Many noted that when live sales returned in 2021, while potential buyers were keen to view works in person for sale prior to an auction, many preferred to bid online at the sale itself.

Figure 3.8 | Share of Online Sales by Second-Tier Auction House Annual Turnover in 2021



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As noted above, online-only sales accounted for 23% of sales in 2021, down from 30% reported in 2020 and 19% in 2019. These sales were split between those made on their own platforms (18%) and through third-party auction aggregators (5%).

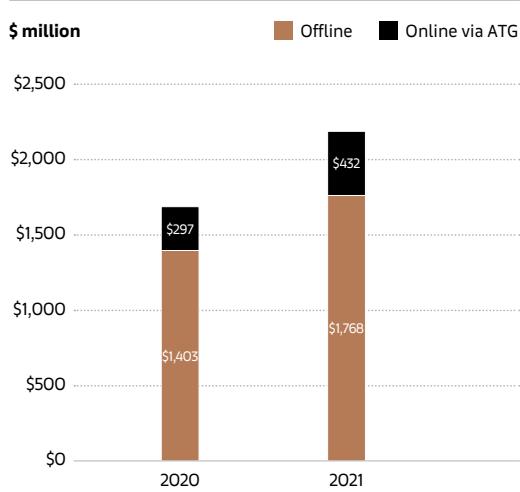
While in 2020, the share of online-only sales was highest for the smallest auction houses in the sample, in 2021, those turning over between \$5 million and \$10 million were highest (at 29%). The lowest share of online sales was for those businesses with total sales exceeding \$10 million in turnover, which reported an average of 16% (down from 25% in 2020). In all segments, the portion of value generated from their own platforms was greater than from third-party platforms, and at 5% in 2021, this was substantially down on the reported 13% in

2020. While some of this is likely to be due to the difference in the sample (with a larger number of businesses with higher turnover in 2021), it reveals that the majority of auction houses prefer to use their own internal platforms for sales and marketing online.

The auction houses surveyed were confident that online channels would continue to grow in the near future, with 91% of the sample predicting e-commerce to increase for their business in 2022.

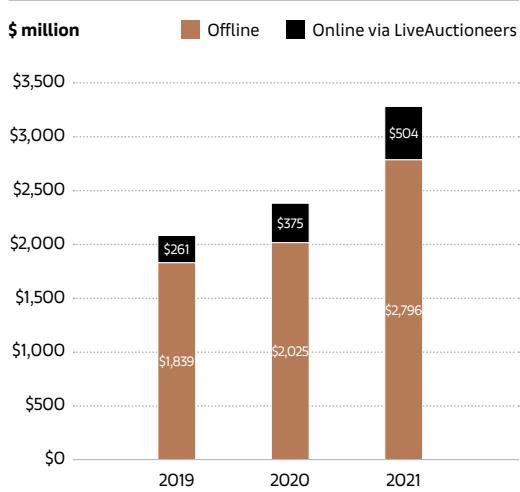
While some auction houses are conducting more sales on their own platforms, this is running in parallel with increased sales on some third-party platforms. There was also some consolidation within third-party platforms in 2021, most notably with the acquisition by Auction Technology Group (ATG) of LiveAuctioneers.com in October. (ATG was already the owner of the art and antiques marketplaces the-saleroom, lot-tissimo, Proxibid, along with BidSpotter and i-bidder for commercial and industrial auctions and floated on the London Stock Exchange in February 2021).

Figure 3.9 | Share of Sales via ATG's Art and Antiques Platforms 2020–2021



© Arts Economics (2022) with data from ATG

Figure 3.10 | Share of Sales via LiveAuctioneers.com 2019–2021



© Arts Economics (2022) with data from ATG

Data supplied by ATG revealed that both the absolute value of sales of art and antiques made through their platforms and the online share increased in 2021. The total hammer value of all art and antiques that were listed on the platform rose 30% to \$2.2 billion from 2020 to 2021, while the value of sales via ATG online rose 46% to reach \$432 million, bringing the share of online from 17% to 19%.³⁸ At LiveAuctioneers.com, sales via the platform rose by 53% year-on-year and have nearly doubled since 2019. Online sales on the platform as a percentage of the total value of goods sold by their members have risen from 13% to 15% from 2019 to 2021. The growth in 2021 was driven both by more items being sold (up by 31%) plus growth in the average price of the items sold (also up by 17%). All segments saw strong growth, including a 65% increase in the value of collectibles sold, 62% growth in furniture sales values, and 55% in art.

³⁸ The annual period cited here for sales by ATG and LiveAuctioneers.com refers to its financial year, which runs from October 1 each year to September 1 in each subsequent year.

Like some of their auction house members, ATG also saw a rise in new and younger buyers in 2021, with an increase of 23% year-on-year in sessions on the platform by visitors aged under 35 years at the-saleroom.com. This younger segment had already increased in number by 72% in 2020 (from 3.9 million to 8.3 million) as lockdowns encouraged many people to spend more time online and access to in-person events was restricted. However, this continued in 2021, with further expansion to 9.3 million demonstrating the permanence of the shift in behavior by many young collectors. Similarly, on LiveAuctioneers.com, there was a 52% growth in bidders aged under 35 years.

It is notable also that these new buyers purchased across a range of categories besides fine art, and the majority of searches on the-saleroom.com in 2021 related to antique and design furniture. Vintage and antique goods have become increasingly popular as more buyers seek sustainable ways to collect and purchase, and with growing awareness of unique and sustainable products available on these platforms at very attractive price points relative to new alternatives.

Artsy, which combines gallery and auction e-commerce, also saw an increase in its auction sales in 2021, with a rise in values of 50% year-on-year. The number of bidders on the platform grew 26% over both channels, and this included many first-time buyers, up 44% in 2021. There was evidence of buying at higher prices online, with its data showing growth of 34% year-on-year in the number of bidders for works priced over \$50,000 and 30% growth in bids. The number of buyers at or exceeding the six-figure price range also increased 38%, showing the greater tolerance of collectors for buying higher-value works of art sight unseen online. These included a record price on the platform in 2021, with Julie Mehretu's *Dissident Score* (2019–2021) selling for \$6.5 million at a benefit auction in June.

Table 3.1 | Website Metrics of Selected Auction Aggregators and Auction Houses in 2021

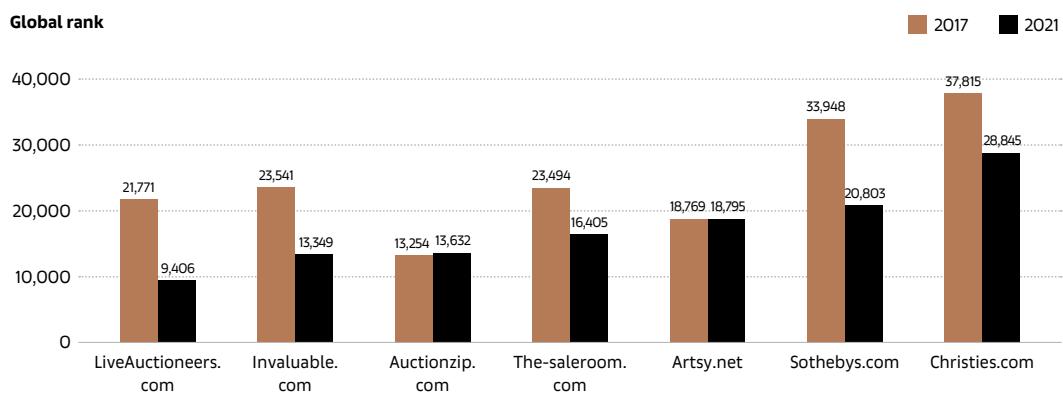
	Global Traffic Rank	Average Monthly Visits (million)	Average Visit Duration (minutes)	Pages per Visit	Bounce Rate
LiveAuctioneers.com	9,406	5.0	05:58	7.3	48.0%
Invaluable.com	13,349	4.4	03:38	4.3	53.3%
Proxibid.com	13,539	2.9	08:52	10.3	31.7%
Auctionzip.com	13,632	2.7	06:00	12.7	41.1%
The-saleroom.com	16,405	2.4	08:24	12.2	35.5%
Artsy.net	18,795	3.5	02:17	3.2	62.0%
Auctionet.com	23,491	2.4	05:34	6.2	39.5%
Drouot.com	39,588	0.8	06:48	8.4	45.5%
Auction.fr	57,458	0.8	02:44	4.3	57.5%
Lot-tissimo.com	69,572	0.5	08:07	13.3	36.6%
Sothebys.com	20,803	3.1	02:16	3.6	61.2%
Christies.com	28,845	2.2	02:57	4.2	60.4%

© Arts Economics (2022) using data from SimilarWeb

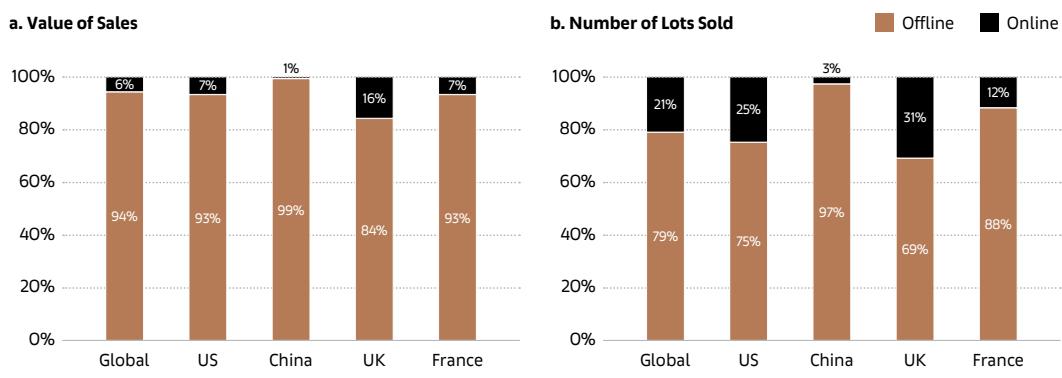
One of the key advantages of using third-party platforms, particularly for smaller auction houses, is that it allows them to access a much larger online audience than might be accessible to them via their own marketing. Table 3.1 sets out some of the key website metrics for some of the auction aggregators currently operating in the art and antiques market based on a sample of data from October to December 2021. This shows the very high volume of traffic through some of these platforms in 2021, including an average of five million visitors per month at LiveAuctioneers.com. The selection of businesses given in the table does not compare like-for-like platforms, as some offer editorial and other services as well as direct sales, and in some cases sales in other industries apart from art and antiques. Nonetheless, it offers an insight into the volume of visitors to these sites, which can rival those of the largest auction houses. For some platforms such as the-saleroom.com, this relatively high level of traffic is combined with long visit duration and high page views, showing a strong level of visitor engagement browsing works for sale. Lot-tissimo.com had the lowest traffic in the period, but the most pages viewed, while Proxibid.com had the longest average visits and lowest bounce rate.³⁹ Also, despite an increase in the total number of active websites to compare against, the ranking of all of these sites was either stable or had improved over the five-year period between 2017 and 2021.⁴⁰

³⁹ The bounce rate in this table measures the number of visitors who view only one page and take no further action before leaving a website.

⁴⁰ Global rank measures the traffic rank of the website compared to all other sites in the world. In the period from 2017 to 2021, according to data from netcraft.com the number of active websites rose by 15%. The highest rank is 1, and therefore a decline in value in Figure 3.11 (number closer to 1) implies a higher ranking.

Figure 3.11 | Change in Global Website Traffic Ranking 2017 versus 2021

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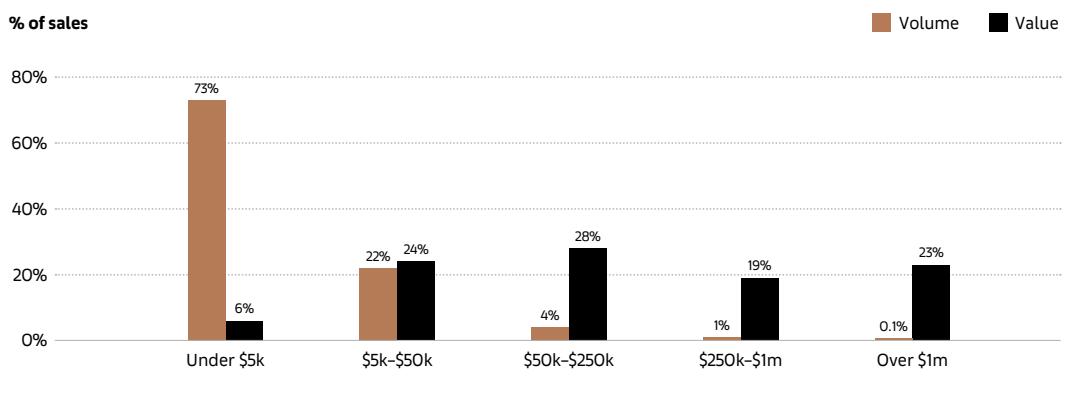
Figure 3.12 | Share of Online Lots Sold at Fine Art Auctions in 2021

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Fine Art Auctions Online

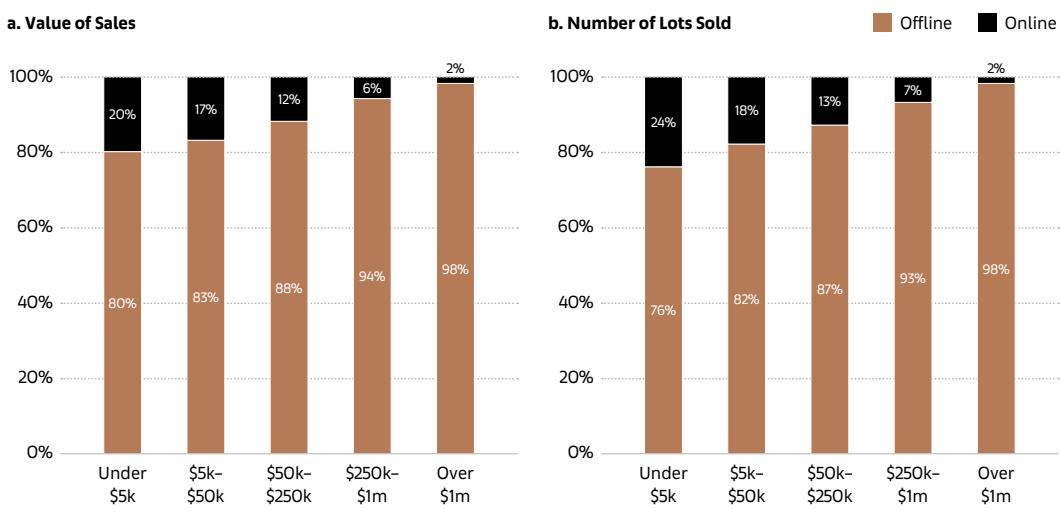
While the decorative art and collectibles sectors added some of the highest volume of transactions to auctions online and dominated in terms of value, the volume and value of fine art in online-only auctions also continued to rise. Combining data from both second- and top-tier brick-and-mortar auction houses and using the database of fine-art-only sales from Artory, 21% of the lots sold at fine art auctions in 2021 were online-only sales, down slightly from 22% in 2020 and double the share of 2019.

Online-only sales were more dominant in some regions, and of the larger art markets, the UK showed the highest share of fine art lots sold online at auction (as it had in 2020), accounting for 31% of the volume of lots and 16% by value, down by 4% on 2020 but still more than five times that of 2019 (3%). As noted above, online sales in China were not as dominant in the traditional auction sector, with the lowest portion of all of the major markets at 3% of lots sold and 1% by value (both stable on 2020). The share of online-only lots sold in the US was also relatively stable, accounting for 25% of the fine art lots sold and 7% by value (up from 1% in 2019).

Figure 3.13 | Share of Online Lots Sold at Fine Art Auctions in 2021 by Price Segment

© Arts Economics (2022) with data from Arty

The majority of fine art lots sold online tend to be in the lower-value end of the market, as is the case with all auction sales (see Section 3.4). In 2021, 95% of all the online-only fine art auction transactions were at prices of \$50,000 or less. 73% were for less than \$5,000 (stable on 2020 but down from 86% in 2019). Unlike the wider auction sector, however, most of the value of online-only sales has also been focused on low- or mid-range price points in recent years, although there is evidence of price points rising. In 2019, just 30% of the value of works sold online were for more than \$50,000. This doubled in 2020 (to 59%) as the online-only schedule of sales expanded and buyers were confined to purchasing online for much of the year. However, rather than a reversion to pre-pandemic levels in 2021 as live sales resumed, the permanence of both the shift online and the tolerance for buying at higher prices sight unseen was clear, as the share of the value of lots sold online for prices above \$50,000 rose again to 70%. Further, while sales priced over \$1 million made up only 6% of total online-only values in 2020, this rose to 23% in 2021, buoyed undoubtedly by sales of digital art.

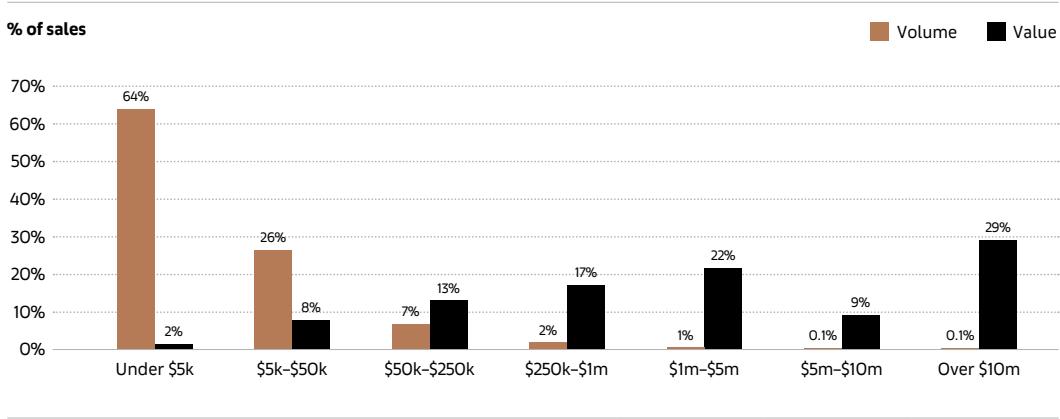
Figure 3.14 | Share of Online Lots Sold in Total Sales at Fine Art Auctions in 2021 by Price Segment

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Even with these advances, online sales in the fine art auction sector still made up a small minority of the total lots sold in all segments. In 2021, while online sales made up almost a quarter of all fine art lots sold under \$5,000, as the price level rose, the share of lots fell, accounting for 11% of all lots sold over \$50,000 and 2% over \$1 million. Similarly, their share of value was still a minority and diminished further as price levels rose. In 2021, just 4% of the value of all fine art auction sales over \$50,000 were online, and only 2% were at prices of over \$1 million, both relatively stable on 2020. (Although a greater proportion of lots were sold online for over \$1 million – and the number doubled from around 25 to 50 – this was in the context of many more lots being sold at this level both online and offline during 2021.)



Figure 3.15 | Share of Lots Sold and Total Values at Fine Art Auctions in 2021 by Price Bracket



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3.3 | Price Segmentation in Fine Art Auctions⁴¹

The auction market had endured two years of declining sales prior to 2021. While the decrease in sales in 2019 was driven by a reduction in the number of high-end lots being sold, in 2020, the effects of the COVID-19 pandemic extended to all segments, with a drop in the value and volume of sales across the board. In 2021, the recovery of the market was also spread over all segments, with each price segment seeing growth. However, this time, by far the strongest rise in values was at the top end of the market, with sales of fine art lots priced over \$10 million showing the strongest growth. Figure 3.15 shows the distribution of fine art auction sales by price segment. Works sold for less than \$50,000 accounted for 90% of the total number of works sold in 2021, and their share of value dropped to 9%, down by 3% year-on-year. The majority of works sold (64%) were for prices below \$5,000, although these made up less than 2% of sales values.

At the higher end of the market, works selling for more than \$1 million accounted for 60% of the value of the market in just 1% of lots, up from 54% in 2020 and 2019 and returning the market to around the same levels as 2018. Within this segment, the largest increase in share and biggest segment of the market by value in 2021 was works sold for prices of over \$10 million. This segment

⁴¹ For the purposes of this analysis, fine art includes paintings, sculptures, and works on paper (including watercolors, prints, drawings, and photographs), while decorative art includes furniture and decorations (in glass, wood, stone, ceramic, metal, or other material), couture, jewelry, ephemera, textiles, and other antiques.

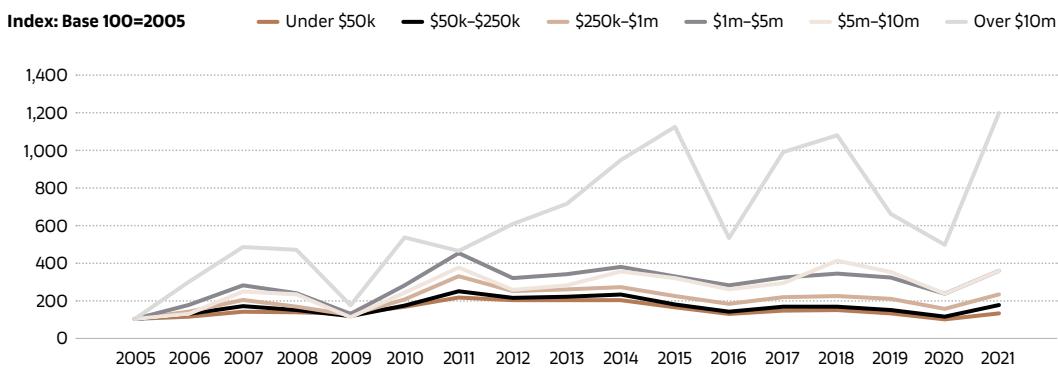
accounted for 29% of total sales values in 2021 (versus 20% in 2020). While all price segments had double-digit increases in value, works sold for over \$10 million increased by just over 140%, with more than double the number of lots sold in 2021 versus 2020. The wider \$1 million-plus segment also grew 86% in value and 60% in terms of the number of lots sold.

To analyze the performance of the different value segments of the market, the following broad definitions are used:

1. The Low End: prices of up to \$50,000;
2. The Middle Market: price segments ranging from \$50,000 to \$250,000 and from \$250,000 to \$1 million; and
3. The High End: prices in excess of \$1 million, including the Ultra-High End, with prices in excess of \$10 million.

The aggregate value of the fine art auction market is strongly influenced by the supply of the highest-priced works of art, with the very thin volume of lots selling for multimillion dollar prices driving most of the volatility in sales. In most years, the growth rates of different segments of the market have tended to increase as price levels increase, with the High End outperforming the middle and lower price tiers. While in previous recessions in the art market, it has been the lack of supply of the highest-priced lots that has driven down values, 2020 was a more unusual case as values fell across the board, and the magnitude of declines in sales at the High End paralleled those of the Middle Market and Low End. But in 2021, there was a dramatic return to outsized performance of higher-priced lots. While all segments advanced in value, the Ultra-High End showed by far the strongest uplift in sales.

Figure 3.16 shows the performance of the different segments from a historical perspective, using an index tracking the growth in sales values in the different price segments, with 2005 as the base year. This shows the volatility of the Ultra-High End and how it has pulled away from the other segments in 2021, as it did in other peaks of the market in 2014 and 2018, driving the boom in auction sales, with a relatively small number of very high-value works boosting growth. Although the fine art auction market as a whole did not reach its previous peak in 2014, the growth in 2021 brought this segment to its highest level since 2005 in terms of the value of sales and the number of lots sold. It also shows that this segment has grown at a much higher rate over time: in the extended period shown from 2005 to 2021, starting with a base of 100 in 2005, the index for the

Figure 3.16 | Growth of Sales by Value in Auction Price Segments 2005–2021

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Ultra-High End (\$10 million-plus segment) reached 1,200, more than double its level in 2020, and almost 10 times the level of the Low End, which showed a much more moderate increase over the period to 129.

Looking in more detail at the changes in sales between different periods, Table 3.2 shows that this Ultra-High End has shown the greatest growth since the last major recession in the market in 2009, increasing in size by almost 600%, and with 438% more lots sold at this level. While all of the segments over \$1 million have shown exceptional growth since that point, the Low End has been virtually stagnant, growing by just 2%. This segment did not recover to its pre-pandemic 2019 level and has declined by 36% over 10 years. Over the decade to 2021, all segments of less than \$1 million have decreased in value (by 20% when aggregated) while those above \$1 million advanced by 40%. In this same period, the Ultra-High End has doubled in size. The outsized growth at the top of the market has been driven by a combination of scarcity of the highest-value works and the ever expanding wealth of the ultra-high net worth collectors chasing these same, small number of unique lots, creating an excess of demand over supply and boosting prices. Increasing wealth inequality in key economies has driven growth in this top segment, giving more spending power to wealthy collectors, who seek limited chances to purchase key works as they come onto the market. This

Table 3.2 | Annual Growth and Share of Auction Sales by Price Segment 2009–2021**a. Value of Sales**

	Low End	Middle Market		High End		
	Under \$50k	\$50k–\$250k	\$250k–\$1m	\$1m–\$5m	\$5m–\$10m	Over \$10m (Ultra-High End)
2009–2021	2%	53%	91%	178%	228%	596%
2012–2021	-36%	-18%	-8%	12%	40%	98%
2019–2021	-1%	18%	12%	11%	1%	81%
2020–2021	32%	56%	50%	52%	52%	142%

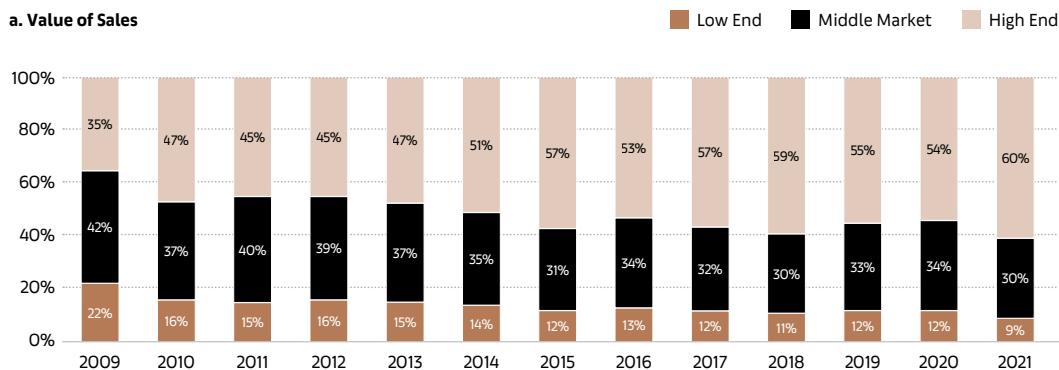
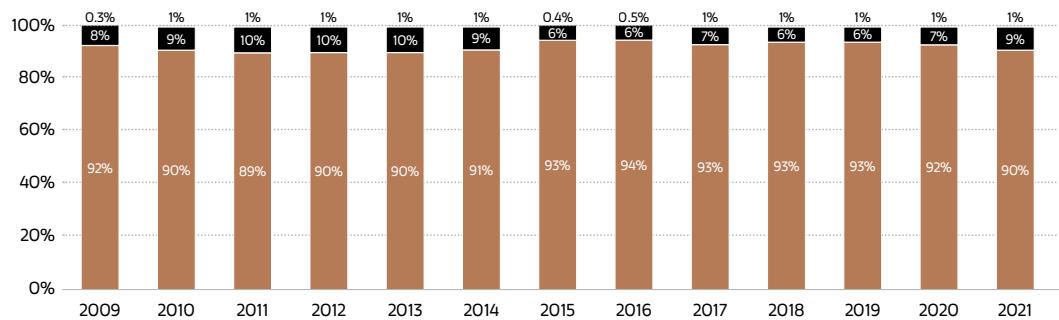
b. Number of Lots Sold

2009–2021	32%	45%	89%	168%	219%	438%
2012–2021	-11%	-22%	-7%	13%	37%	85%
2019–2021	-19%	18%	13%	16%	0%	65%
2020–2021	24%	54%	50%	57%	51%	113%

© Arts Economics (2022) with data from Artnet

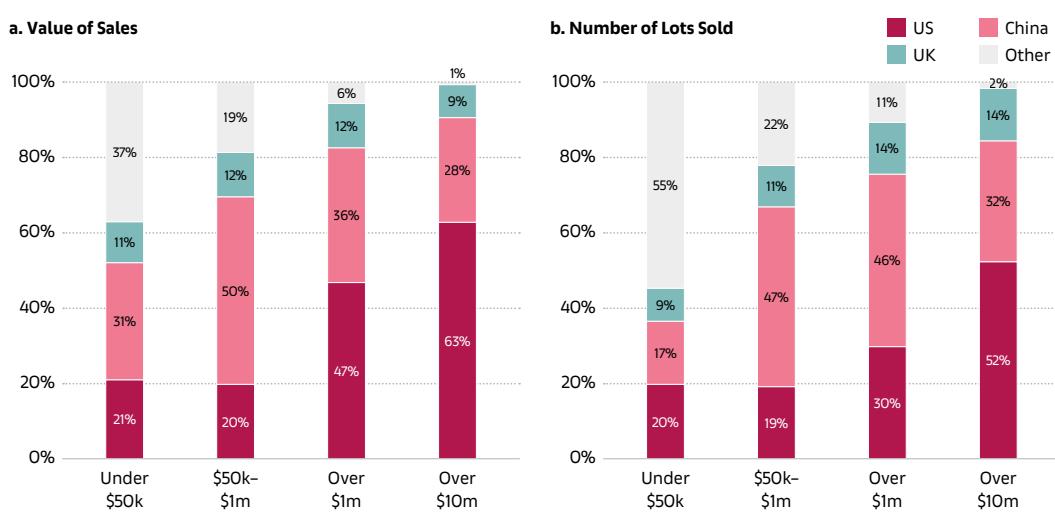
excess demand has also encouraged vendors to bring works to the market, and although they still represent a tiny fraction of the works sold, the volume of works sold in the Ultra-High End over the 10-year period also increased by 85%.

As higher-priced sales have outperformed lower-priced segments, the market share of works sold at auction for over \$1 million has expanded in size. In 2005, the value accounted for by sales of over \$1 million was 33% but as the market boomed it grew to nearly half (49%) of total sales by 2008. This fell to 35% at the height of the global financial crisis in 2009 with the Ultra-High End only having a 10% share. However, despite the ups and downs in the market, the share of this segment has pushed up since that point. While remaining stable in the recession of 2020 as all segments lost value, the boom of 2021 pushed it to its highest level in more than a decade, of 60%. Ultra-High End lots accounted for nearly three times their previous share in 2009 and were up by 13% over a decade (from 16% in 2012). Some of this is due to inflation over time, but it has also been driven by the superior growth of the Ultra-High End relative to other segments. These changes have been at the expense of the Middle Market, which dropped from 39% to 30% in the same 10-year period.

Figure 3.17 | Market Share in Auction Price Segments 2009–2021**a. Value of Sales****b. Number of Lots Sold**

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Considering the volume of sales, there has been very little change in share over the decade. The High End of the market accounted for 1% of the number of fine art lots auctioned in 2012 and this was still the case in 2021. Most of the day-to-day transactions within the auction market take place at the Low End, and this remained stable at 90% over 10 years.

Figure 3.18 | Market Share of the Fine Art Auction Market by Price Segment in 2021

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The three largest auction hubs of China, the US, and the UK have consistently accounted for the majority of the value of sales and are where the highest-price works are sold to both local and international buyers. Because of their dominance at the High End of the market, their combined market share increases as prices rise.

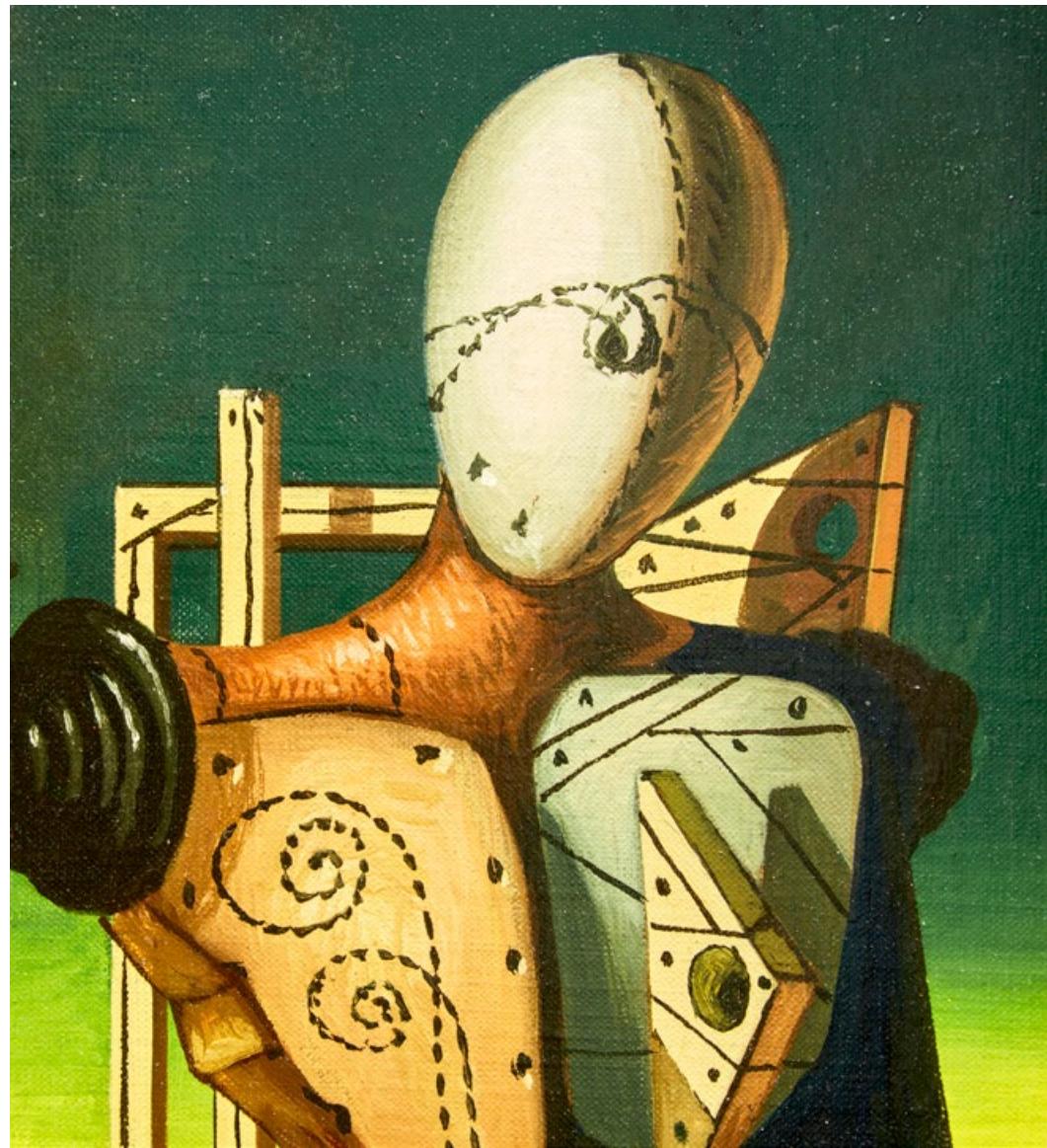
The three largest auction hubs of China, the US, and the UK have consistently accounted for the majority of the value of sales and are where the highest-price works are sold to both local and international buyers

In the Low End of the market, the US, China, and the UK accounted for 63% of sales by value in 2021 and 45% of the lots sold, both relatively stable on 2020. In the Middle Market, their share increased to 81%, stable on 2020 (and 78% by volume). China accounted for by far the largest share of sales in this segment at half the value and 47% of the lots sold.

However, in the market for sales of over \$1 million, their share reached 94% by value, with the fourth-largest market of France accounting for a further 3% or half of the remainder. The US has led this segment in terms of market share for most recent years, but fell to second place in 2020, with 36% of total sales of over \$1 million, behind China (43%). However, it regained its position in 2021 with 47% of the value of sales in the segment, on par with 2019, while both China and the UK lost ground.

At the Ultra-High End, 98% of the value of sales came from these three top markets. The US held the largest share in previous years by a substantial margin, but again, after a difficult year in 2020 it was marginally behind China. The old hierarchy was restored in 2021, with the US leading this segment, up by 21% in share year-on-year to 63% by value and just over half (52%) the lots sold.

**At the Ultra-High End, 98% of the value
of sales came from the three
top markets, with the US leading this
segment with 63%**



3.4 | Fine Art Sectors

The fine art auction market once again dominated decorative art and antiques in terms of the value of sales in 2021, as it has in most recent years, and it accounted for most of the highest-priced transactions. After a very challenging year in 2020, with all sectors in the fine art auction market declining, 2021 marked a significant improvement for fine art sectors across the board.

To assess the performance of sales by sector, definitions of the sectors are based on specific criteria such as an artist's date of birth, the date of creation of their works, and also the importance of artists to a particular movement. Within the art trade, there are many different definitions of the various sectors but, for the purposes of this analysis, we have used the following:⁴²

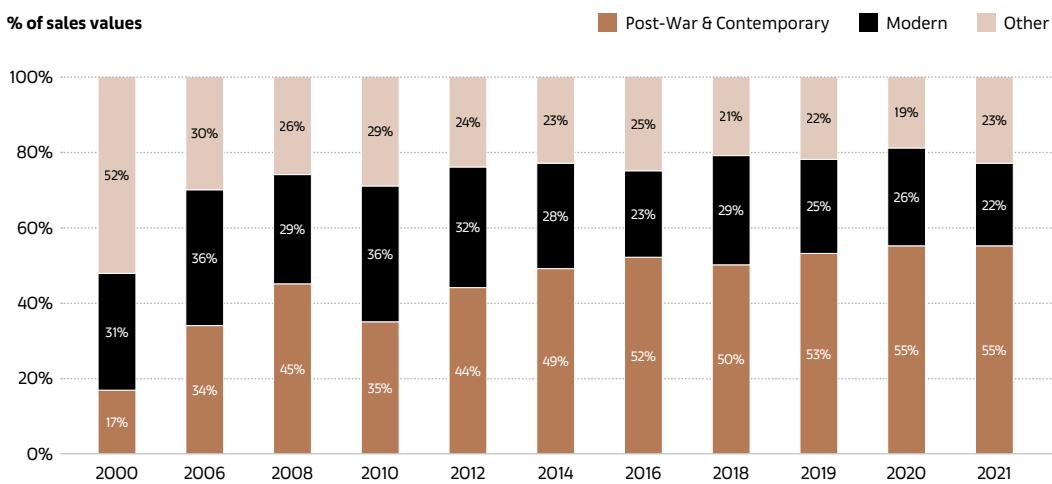
- a. Post-War and Contemporary, defined as artists born after 1910;
- b. Living artists, defined as artists alive in 2021, which are analyzed as a subset of the Post-War and Contemporary sector;
- c. Modern, defined as artists born between 1875 and 1910;
- d. Impressionist and Post-Impressionist, defined as artists born between 1821 and 1874;
- e. Old Masters, defined as artists born between 1250 and 1821; and
- f. European Old Masters, defined as Old Master artists of European origin, which are analyzed separately as a subset of the Old Masters sector.

In 2021, the largest sector in the fine art auction market by value was Post-War and Contemporary art, which along with Modern art accounted for 77% of the value of sales

⁴² Most artists' categorization is based on date of birth, but there are a small number of artists who are included in different sectors because of their relevance to a particular movement, for example, Francis Bacon (born 1909) and Mark Rothko (born 1903) are both included in the Post-War and Contemporary sector despite the cut-off date of 1910.

To ensure the most consistent analysis of sales over time, one central art price database is used from Artory, with some data for Chinese sales supplemented from Artron. The Artory database covers sales from 4,000 auction houses, with consistent auction results gathered for around 250 businesses in more than 40 countries. The database comprises results from major sales in first- and second-tier auction houses around the world and does not restrict inclusion by final price or estimate value, hence offering coverage of the full range of prices that occur at auction. The data by sector in the following analysis is based on this sample of 250 auction houses, but it only includes data where an artist can be fully attributed to this particular sale, and their date of birth is clearly established so that the lot can be accurately classified into one of the sectors. This means that the analysis does not contain all lots sold in each sector (or any lots that fall outside these sectors) but allows for consistent estimates over time of the key trends.

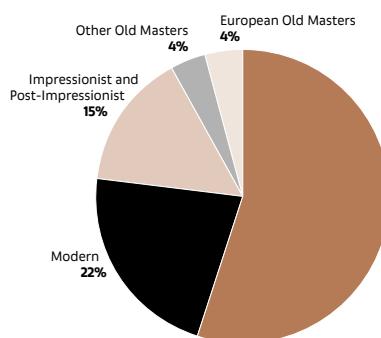
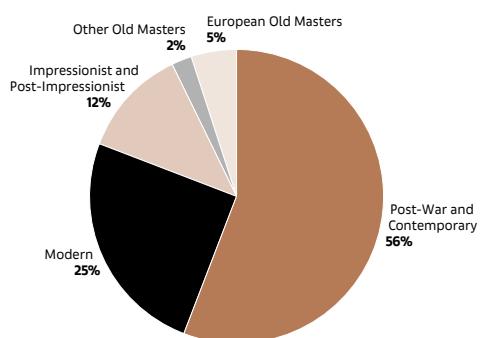
It is estimated that these top auction houses represent in the region of 70% of the value of the market in most sectors. The sales and shares of different sectors discussed throughout the chapter refer to the proportionate share of these sectors out of the four main sectors of the art market: Post-War and Contemporary, Modern, Impressionist and Post-Impressionist, and Old Masters, including European Old Masters. These sales exclude transactions that cannot be classified within these distinct sectors, or that predate Old Masters (that is artists born before 1250). While these tend to make up a very small portion of sales in most markets, there are certain regions where they account for a higher share. For example, within the Artory database, just 2% of fine art sales fell outside of these sectors in the US, but there was a larger 28% of excluded sales in China in 2021. This is due, in part, to the fact that earlier, ancient artists made up a more significant portion of sales, and also that some artists merged from Artron's data could not be fully attributed or a date of birth could not be assigned.

Figure 3.19 | Market Share by Value of the Fine Art Auction Market: Selected Years 2000–2021

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In 2021, the largest sector in the fine art auction market by value was once again Post-War and Contemporary art, which along with Modern art accounted for 77% of the value of sales at fine art auctions and 81% of the number of lots sold.⁴³ Post-War and Contemporary and Modern art have led the fine art market for the last 20 years, with the largest combined sales values and where the most record prices are achieved each year. Both sectors have gained share over the last 20 years, from a minority of sales in the 1990s to almost half the market in 2000 and a majority in each year since, with Post-War and Contemporary leading consistently since 2011.

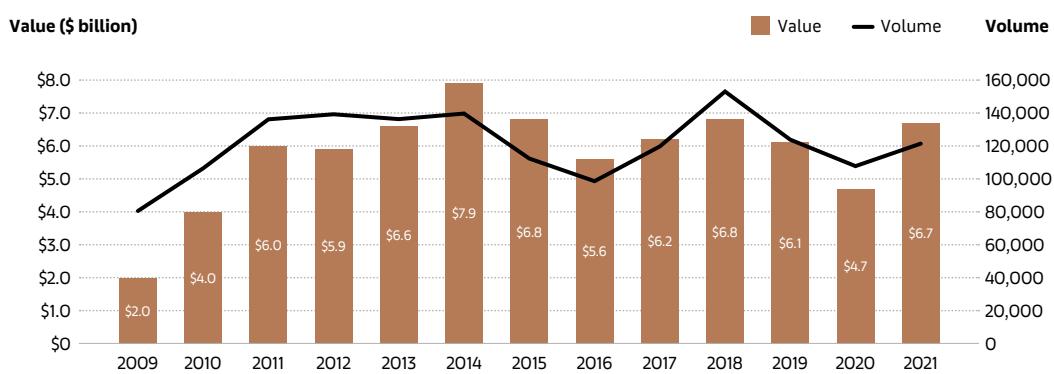
⁴³ The shares here and throughout the chapter refer to the proportionate share of these sectors out of the four main sectors of the art market: Post-War and Contemporary, Modern, Impressionist and Post-Impressionist, and Old Masters, including European Old Masters. It excludes transactions that cannot be classified within these distinct sectors, or that predate Old Masters, that is artists born before 1250.

Figure 3.20 | Market Share by Sector of the Fine Art Auction Market in 2021**a. Value of Sales****b. Number of Lots Sold**

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Sales in the Post-War and Contemporary art sector totaled \$6.7 billion, an advance of 42% year-on-year



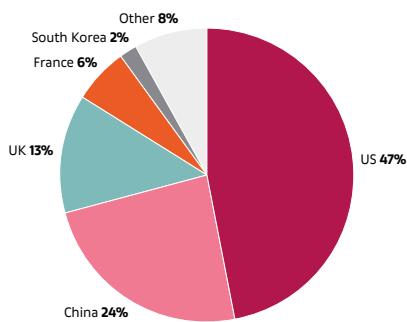
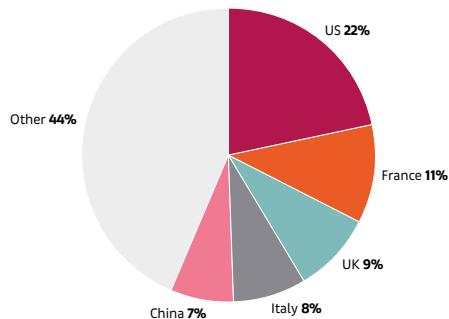
Figure 3.21 | Post-War and Contemporary Art Auction Sales: 2009–2021

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3.5 | Post-War and Contemporary Art

Post-War and Contemporary art maintained its position as the largest sector of the fine art auction market in 2021, with a share of 55% of the value of global fine art auction sales (stable on 2020) and 56% by volume (up by 1%). Sales in the sector totaled \$6.7 billion, an advance of 42% year-on-year, with the number of lots sold also increasing by 13%.

Sales of Post-War and Contemporary art have shown significant volatility in recent years, growing rapidly until 2007, but then declining by 58% in the fallout of the global financial crisis between 2007 and 2009 as the supply of the highest-priced works contracted. From this low of just \$2.0 billion, the sector recovered rapidly, reaching a historic peak of \$7.9 billion in 2014. Performance was mixed from that point, with less Ultra-High End sales in 2019 leading to a decline of 10%, followed by a further 23% drop to \$4.7 billion during the pandemic in 2020 as values and lots declined across all segments. The growth in 2021 restored the market to close to 2018 levels and, although still 15% below the peak of 2014, sales have grown by over 200% since the low of 2009.

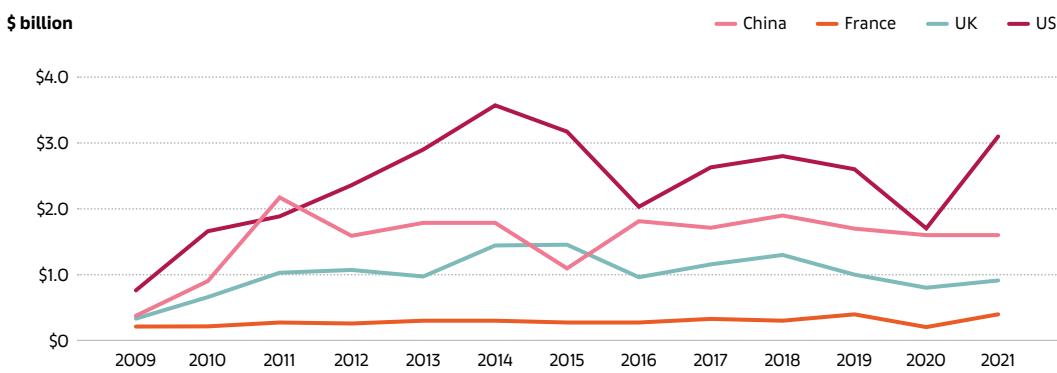
Figure 3.22 | Market Share of the Post-War and Contemporary Sector in 2021**a. Value of Sales****b. Number of Lots Sold**

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The top three markets (the US, China, and the UK) accounted for 84% of the value of sales in 2021 (down by 3% year-on-year) and 38% of the lots sold. The US was the largest market in this sector for most recent years and substantially increased its share to 47% of the value of sales in 2021 (up by 11% year-on-year and 5% greater than 2019) and 22% of global volumes.

After a decline of 35% in 2020 to \$1.7 billion, its lowest level since 2010, sales in the US boomed in 2021, with an increase in value of 87% to \$3.1 billion, restoring the market to just below the level of 2015. With this uplift, the market had increased by just over one third of its value over a decade and was over four times the value of 2009 (\$721 million). The advance in sales was driven by many high-end sales during the year, including the highest-priced lot in the sector in 2021, Jean Michel Basquiat's *In This Case* (1983), which was sold at Christie's in May for \$93.1 million with a minimum price guarantee, and Mark Rothko's *No. 7* (1980) for \$82.5 million at Sotheby's New York in November, also under guarantee.

China's market share decreased by 11% year-on-year to 24%, taking second position next to the US by value. Its portion of the volume of lots also declined to 7%. Post-War and Contemporary art

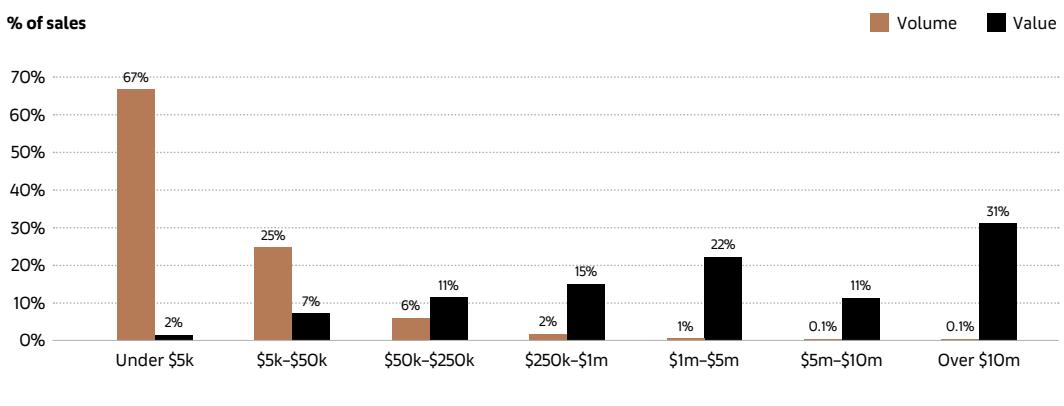
Figure 3.23 | Sales in the Post-War and Contemporary Sector Key Markets 2009–2021

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sales in China decreased only 6% by value in 2020, one of the most moderate declines of all of the major art markets. Its growth in 2021 was also the most moderate, with a 2% increase to just over \$1.6 billion, down by 27% from its peak in 2011, but with substantial growth over time (over 300% since 2009). Chinese artist Zao Wou-Ki, who had been the highest-selling artist in the sector in both 2019 and 2020, fell back in the rankings (to seventh), but still achieved sales of \$147 million, most of which were in China, including 13.02.62 (1962) for \$21.0 million at Sotheby's Hong Kong SAR (China) in May. The highest-priced lot by a Chinese artist in the sector was Chu Teh-Chun's *Harmonie hivernale* (1986) for \$29.5 million at Sotheby's Hong Kong SAR (China) in April.

The UK's share of Post-War and Contemporary sales dropped by 3% year-on-year to 13% by value with the volume of lots sold also declining to 9%. After a two-year decline to \$779 million in 2020, the lowest level in a decade, sales grew by 11% in 2021 to reach \$863 million. This new total was still 19% below sales values 10 years previous in 2012.

After a substantial decline of 41% in 2020, Post-War and Contemporary art sales in France reached their highest level in 15 years with a large increase in value of 87% to \$419 million. This brought France's global share by value to 6% (up by 1% year-on-year) and 11% of the number of lots sold. Along with strong sales in Germany and some other mid-sized markets, sales in the EU advanced by 42% to reach \$699 million. However, without the UK market, this region is still considerably smaller in size than previous years, accounting for just 10% of global sales by value in 2021.

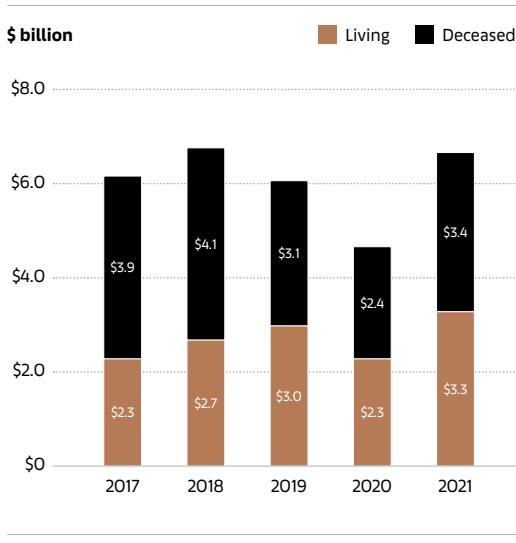
Figure 3.24 | Sales by Price Bracket in the Post-War and Contemporary Sector in 2021

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Although the Post-War and Contemporary sector contains some of the highest-priced lots sold at auction, most of the sales that take place every year are at much lower price levels. In 2020, 91% of works sold were priced below \$50,000 and 67% were for less than \$5,000 (stable in share on both 2019 and 2020). Works priced at over \$1 million accounted for the majority (64%) of value in 2021, an increase in share of 5% year-on-year, in just 1% of lots sold. The number of lots sold in this segment rose by 32% year-on-year, putting it on par with levels in 2019. However, sales values rose by 58% which brought them even higher than 2019. The proportion of works sold at the very highest end of the market of over \$10 million also reached a high of 31%, the largest segment of the market by value, up by 9% on 2020 and one of its highest in 10 years. The value of sales in this top segment doubled year-on-year, achieving a level 60% higher than 2019.

The highest-selling artist at auction in this sector in 2021 was Jean-Michel Basquiat, with sales of over \$426 million, including the highest-priced lot mentioned above. Alongside Andy Warhol, Gerhard Richter, Cy Twombly, and Banksy, the top five artists accounted for 25% of total values, an increase in the concentration of value by 6% on 2020, and 10% of the lots sold in the sector. Value has become gradually more concentrated at the top of this sector in recent years, with a small number of artists accounting for an increasing share of sales. The value accounted for by

Figure 3.25 | Sales of Works by Living versus Deceased Post-War and Contemporary Artists 2017–2021



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primarily secondary market sales, most sales are of works from artists that are reasonably well established, although there is a wide variety of levels and stages. Because of this mix of artists, living artists' works have historically tended to be a minority of the value of sales in the Post-War and Contemporary sector, but in the last few years, record sales and high prices by many top-tier artists have increased this share.

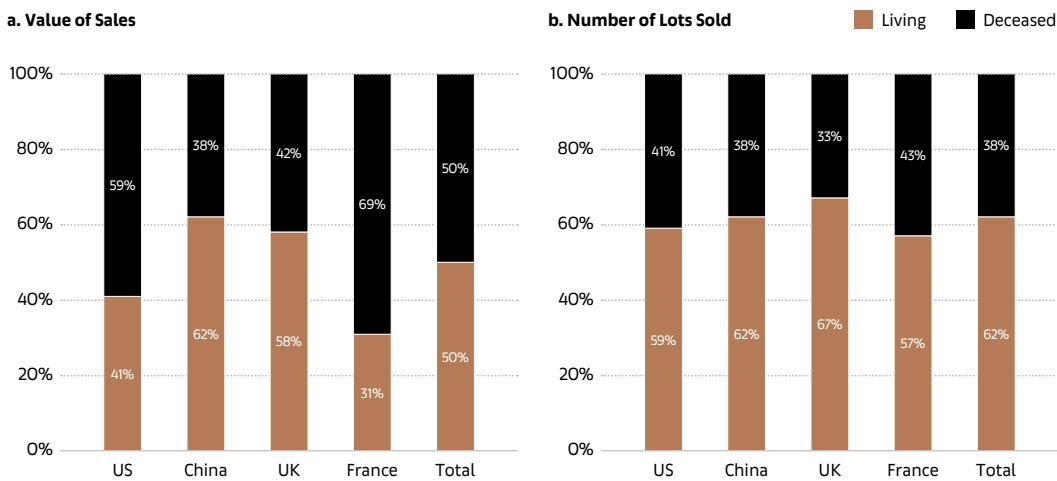
After a decline of 23% in 2020, sales in this sub-sector rose by 44% to \$3.3 billion, its highest level in five years. Sales of deceased artists' works also rose by 40%, leaving these two parts of the market on par in terms of their proportion of values at 50% each. In terms of their overall share of the fine art auction market, sales of living artists' works made up a substantial 27% of the value of sales in 2021.

the top 20 artists shifted up from 36% in 2018 to 38% of total sales values in 2019 before a more substantial rise to 48% in 2020. In 2021, this share increased again to over half the market (54%), as value concentrated around a relatively small group of very established, Post-War artists.

The majority (75%) of Post-War and Contemporary sales by value in 2021 were at Sotheby's and Christie's, with Sotheby's slightly ahead with a 41% share. Along with Poly Auction, China Guardian, and Phillips, these top five auction houses made up 88% of the value of sales (and 31% of the number of lots sold).

The Sub-Sector of Living Artists

Sales in the Post-War and Contemporary sector are made up of the work of both deceased and living artists. As the auction market represents

Figure 3.26 | Share of Sales by Living versus Deceased Post-War and Contemporary Artists in 2021

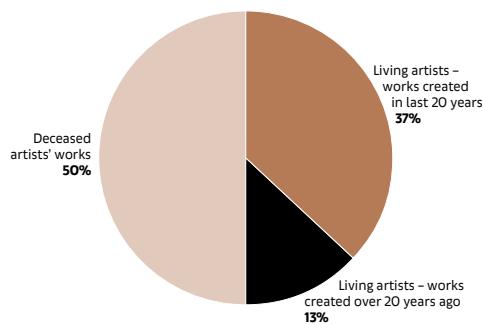
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Sales grew in nearly all markets, with values in the US doubling year-on-year in 2021 after experiencing one of the largest declines of all regions in 2020. The US was the largest market in this segment, accounting for 39% of sales, an advance of 11% year-on-year, next to China at 30% (down by 9%), and the UK with 15%. Sales of living artists' works in France were up by 67% with a more moderate increase in China of 11%, while UK sales grew by 2%.

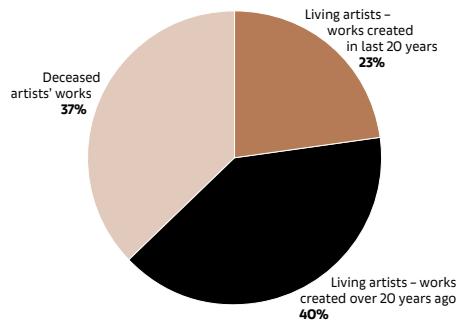
While the balance between sales of living versus deceased artists' works globally was 50:50, there was considerable variation between regions, and of the larger markets, China and the UK had the highest share of living artists' works by value, with a majority of 62% and 58% respectively versus 41% in the US. In terms of the number of transactions, sales of works by living artists made up the majority in all of the major markets and accounted for 62% of the total lots sold globally in the Post-War and Contemporary sector.

**Figure 3.27 | Share of Sales within the Post-War and Contemporary Sector in 2021:
Living and Deceased Artists' Works**

a. Value of Sales



b. Number of Lots Sold



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Most of the highest-priced lots of the year by living artists were sold in New York, with Beeple's previously mentioned *Everydays: The First 5000 Days* (2021) the highest overall, followed by Peter Doig's *Swamped* (1990) for \$39.9 million, also at Christie's, and Gerhard Richter's *Abstraktes Bild* (1993) for \$33.0 million at Sotheby's as part of the Macklowe Collection.

Gerhard Richter was the highest-selling living artist in 2021, with 9% of the value of sales. The segment was slightly more concentrated than the wider Post-War and Contemporary sector, with Richter, along with the rest of the top five artists (Banksy, Yoshitomo Nara, Yayoi Kusama, and Beeple) making up 29% of total sales values. 55% of the value of sales by living artists were concentrated on the 20 top artists in this segment, a stable share on 2020 but up from just 37% in 2018 as the market has become more concentrated at the top. There were close to 500 lots at auction by living artists in 2021 that exceeded \$1 million, including 37 for over \$10 million.

Drilling down further within the segment of living artists' works, there has also been a rising share of relatively newly created works being sold at auction. While this trend has been noted in recent years, it was particularly apparent in 2021 as newly minted digital works by artists were sold as NFTs and the pandemic inspired both artistic responses and the creation of work, as well as more speculation in the market. In 2021, 37% of the works by value sold in the Post-War and Contemporary

sector were works that were created in the last 20 years, up by 11% year-on-year (and from 14% in 2017). These works accounted for 74% of the value of all works sold by living artists (up 19% year-on-year) and reached \$2.5 billion at auction (from \$1.2 billion in 2020 and \$1.6 billion in 2019).

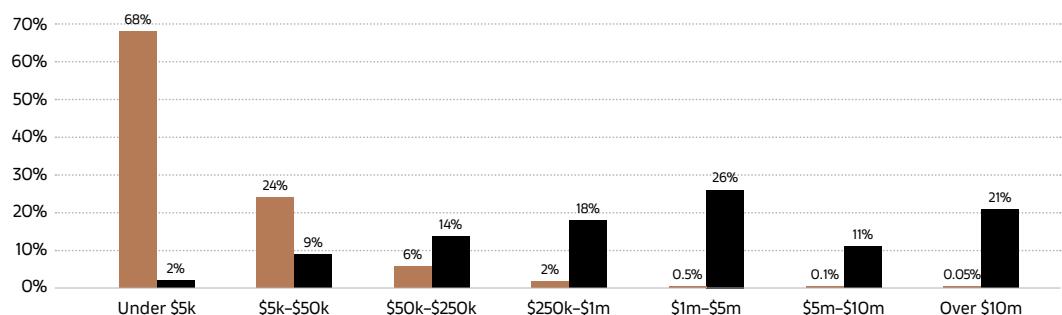
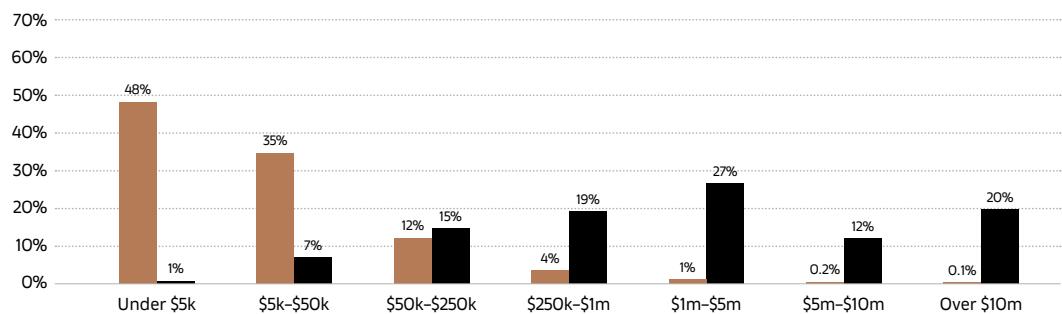
Top-selling artists in the segment of newly created works included Banksy, with sales at auction of works created in the last 20 years of \$165 million, nearly three times their level in 2020, Beeple (\$98.3 million in just two lots, which were also both in the top five lots sold in this sector), and Yayoi Kusama (\$92.8 million). The growing share of this segment indicates an increasingly short period from first sales in the primary market to resales in the secondary sector for these artists, a strong indicator of more investment-driven speculation in the market. It also shows how the auction sector has increasingly encroached on sales of newly created works, including some from the primary market, which may have been traditionally seen as an area more exclusive to dealers.

The market for newly created works is much more dominant in China, where several of the top lots sold in the Post-War and Contemporary sector were created in the last decade, representing 72% of the value of these sales in China, with much smaller shares in other major markets (23% in the US, 35% in the UK, and 25% in France). In 2021, these top lots in China included *Landscape (The Drizzle, The Orchid, Is Spring, The Infinite Tower, The Misty Rain, The Autumn Forest, The Distant Mountains, The Mountains, and The Snow)* (2020) by Cui Ruzhou, which sold for \$53.6 million at Yongle Auction Company in Beijing. China accounted for 47% of the value of these new works globally, next to the US with 30%. The high proportion in China is due to rapid resales by collectors as well as artists and other agents selling primary market works directly on the auction market, which has been rare elsewhere before 2021.

One of the drivers of the boost in sales for living artists in 2021 was a greater share of \$1 million-plus lots sold in this segment. The proportion of works selling at this level increased by 6% year-on-year to account for 58% of the value of total sales in just 1% of the works sold. As in the wider Post-War and Contemporary sector, however, most sales continued to take place at much lower prices, with 92% of works sold for less than \$50,000 and the majority (68%) for prices of less than \$5,000, stable on 2020. The largest segment by value, consistently for the last three years and again in 2021, was sales at prices of between \$1 million and \$5 million. This segment accounted for 26% of total values in 2021, on par with 2020.

This was also the largest price segment by value of works created within the last 20 years. For these newer works, fewer lots sold for under \$5,000 (at 48%), and there was a higher number

Figure 3.28 | Share of Sales of Living Artists' Works by Price Bracket in 2021**a. All Works by Living Artists**

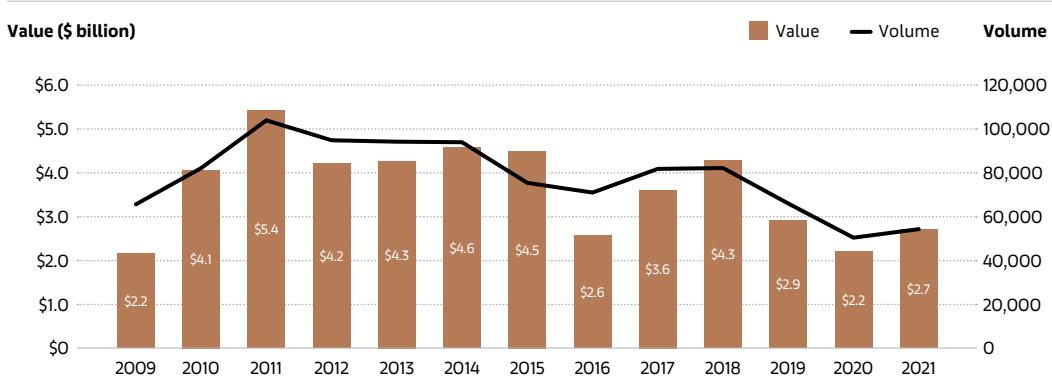
**b. Works Created in the Last 20 Years**

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of transactions in the range from \$5,000 to \$50,000 (35% of all lots in this category), similar to 2020, demonstrating the higher price points for these newly created and quickly resold works.

Sotheby's and Christie's sold about one quarter of these newly created works in 2021, and accounted for just over half (55%) of the value of sales. The other main auction houses selling these new works were Poly Auction, Phillips, and Yongle Auction Company, with a combined share of 18%. The majority (67%) of the value of sales of works by living artists were also carried out at Sotheby's and Christie's, and along with Poly Auction, Phillips, and China Guardian, the top five houses were responsible for 87%.



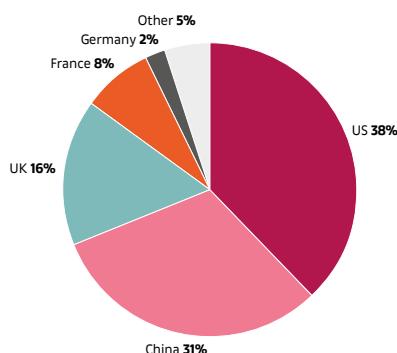
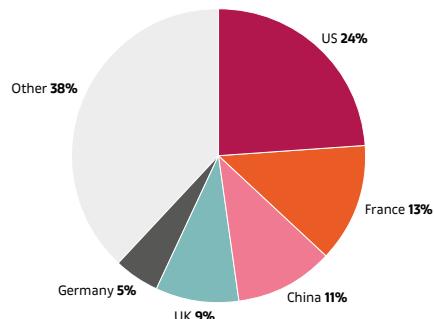
Figure 3.29 | Modern Art Auction Sales 2009–2021

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3.6 | Modern Art

Modern art was the second-largest sector in the fine art auction market in 2021, with a share of 22% of sales by value, down by 4% on 2020, and accounting for 25% of the number of transactions. Despite having some of the highest-value lots in the market, shortage of supply at the high end of this market has meant that its share has diminished significantly over the last 20 years, and sales of Post-War and Contemporary art have expanded. Modern art sales were almost twice the size of Post-War and Contemporary sales in 2000 but have been consistently lower in the last 10 years, and the margin between them was at its widest level to date in 2021, increasing to a gap of 33% from just 12% 10 years previously in 2012.

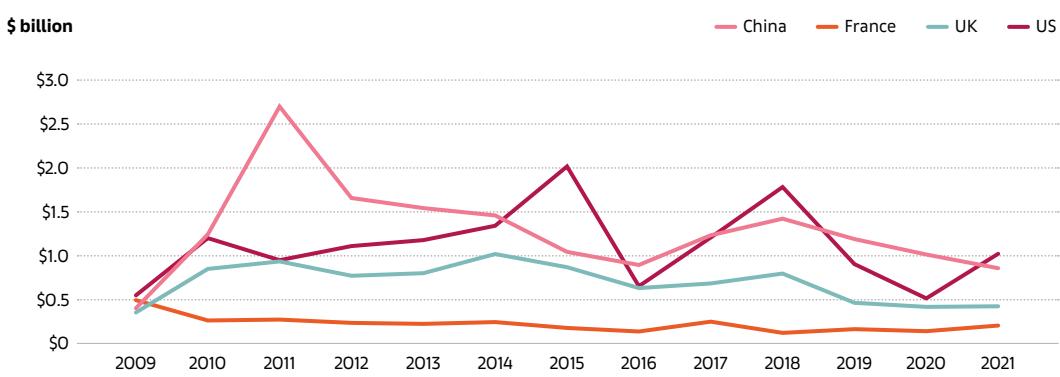
The Modern art market reached a peak of \$5.4 billion in 2011, driven up by a boom in China and a strong recovery elsewhere from the global financial crisis, when reduced supply had seen sales lose one third of their value from 2007 to 2009. Since that point, sales have endured considerable volatility, and two years of substantial declines in value brought the market to its lowest level in 10 years in 2020 (\$2.2 billion), as the volume of lots fell by almost 40%. Sales improved in 2021, increasing by 23% in value to \$2.7 billion, with 8% more lots sold, however, this was a much more subdued recovery than in 2010 (when values bounced back 87% within one year) as the two major markets of the US and China diverged in performance.

Figure 3.30 | Market Share of the Modern Art Sector in 2021**a. Sales by Value****b. Number of Lots Sold**

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Sales in the US bounced back strongly in 2021, doubling in value to just over \$1.0 billion, after having had one of the sharpest declines of any of the major markets in 2020, with a drop of 43% to \$514 billion, their lowest point in over 15 years. Even with this increase, values remained substantially lower than their peak in 2015 of just over \$2.0 billion, and were also down by 5% on a decade previous in 2012 (\$1.1 billion). They were, however, enough to regain the market's premier position in the sector, with a 38% share of global sales by value (up by 16% year-on-year), and 24% of the lots sold (stable on 2020).

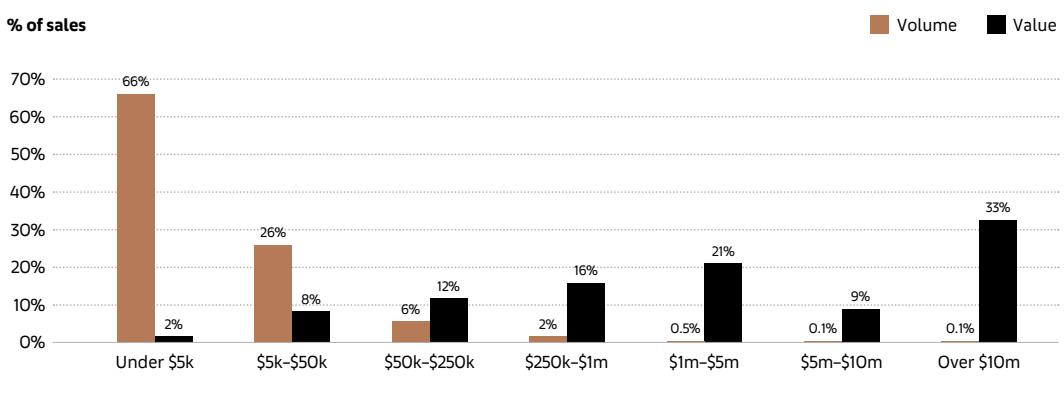
China had fared better than the US in 2020 with a significant number of very highly priced works boosting its global share to 45%, making it the largest market in the sector that year with just over \$1.0 billion in sales. However, sales fell by 16% year-on-year in 2021, bringing the market to \$847 million and its share down to 31%. Sales remained only one third of the size of their peak in 2011, when China was also the largest market worldwide in the sector, with \$2.7 billion in sales and a global share of 50%.

Figure 3.31 | Sales in the Modern Art Sector Key Markets 2009–2021

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In the UK, sales were relatively stagnant, growing by just 2% to \$431 million. This subdued performance meant that aggregate values were still at their lowest level in a decade, although 23% above 2009, when sales dropped to \$351 million. The UK market's global share fell to 16%, down by 3% year-on-year but on par with 2019. The recovery was significantly stronger in the French market with sales rebounding 68% to \$229 million, after a fall of 10% in 2020. This boosted France's share of global sales to 8%, up by 2% year-on-year, and also accounting for 13% of the volume of transactions. With more moderate but significant recoveries in some other major markets such as Germany and Austria, the EU market (if measured excluding the UK in both years) rose from 11% of global sales by value in 2020 to 13% in 2021.

Pablo Picasso remained the top-selling artist in the Modern art sector for the fourth consecutive year, with sales of \$657 million, and accounting for 27% of the value of sales in 2021. Picasso's *Femme Assise près d'une Fenêtre (Marie-Thérèse)* (1932) was the highest-selling lot of the year, selling at Christie's New York for \$103.4 million, along with 11 other lots in the top 20, 18 of which sold for over \$10 million. Picasso also accounted for the third-highest lot, *Femme au Béret Rouge-Orange* (1938) selling for \$40.5 million at Sotheby's New York. The second-highest was Alberto Giacometti's *La Nez* (1949/1965), which sold for \$78.4 million at Sotheby's also in New York. All three were sold under guarantees or irrevocable bids.

Figure 3.32 | Share of Sales in the Modern Art Sector by Price Bracket in 2021

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The top five artists (which also included Zhang Daqian, René Magritte, and Fu Baoshi) comprised 49% of the market by value, up from 41% for the top five in 2020, and double the concentration of values around these top artists compared to Post-War and Contemporary art. The top 20 artists accounted for 72% of the total value of sales, up marginally on 2020, but significantly more concentrated than in 2019 (at 59%) and than Post-War and Contemporary art.

This concentration of value at the high end is clear when sales are segmented by price level. In 2021, works sold for over \$1 million increased by 6% to 63%, driven mainly by increases at the very highest end. Works sold for over \$10 million accounted for 33% of the value of sales (from 23% in 2020 and 18% in 2019). While the value of sales of works priced between \$1 million and \$10 million saw a moderate increase of 10%, in the highest \$10 million-plus segment values rose 76% year-on-year from 2020, with 60% more lots sold.

Despite this growth in the high end, most works by number (92%) were still sold for prices of below \$50,000 and these made up 10% of the value of Modern art auction sales. The majority (66%) of lots sold were at prices of less than \$5,000, although these accounted for a very small share of just 2% of total sales values, as they had for the last two years.

Sotheby's and Christie's were virtually on par in this sector in 2021 with a combined 69% of sales by value, up from 55% in 2020. Along with China Guardian, Poly Auction, and Bonhams, the top five houses made up 89% of total sales by value (up by 12% year-on-year).

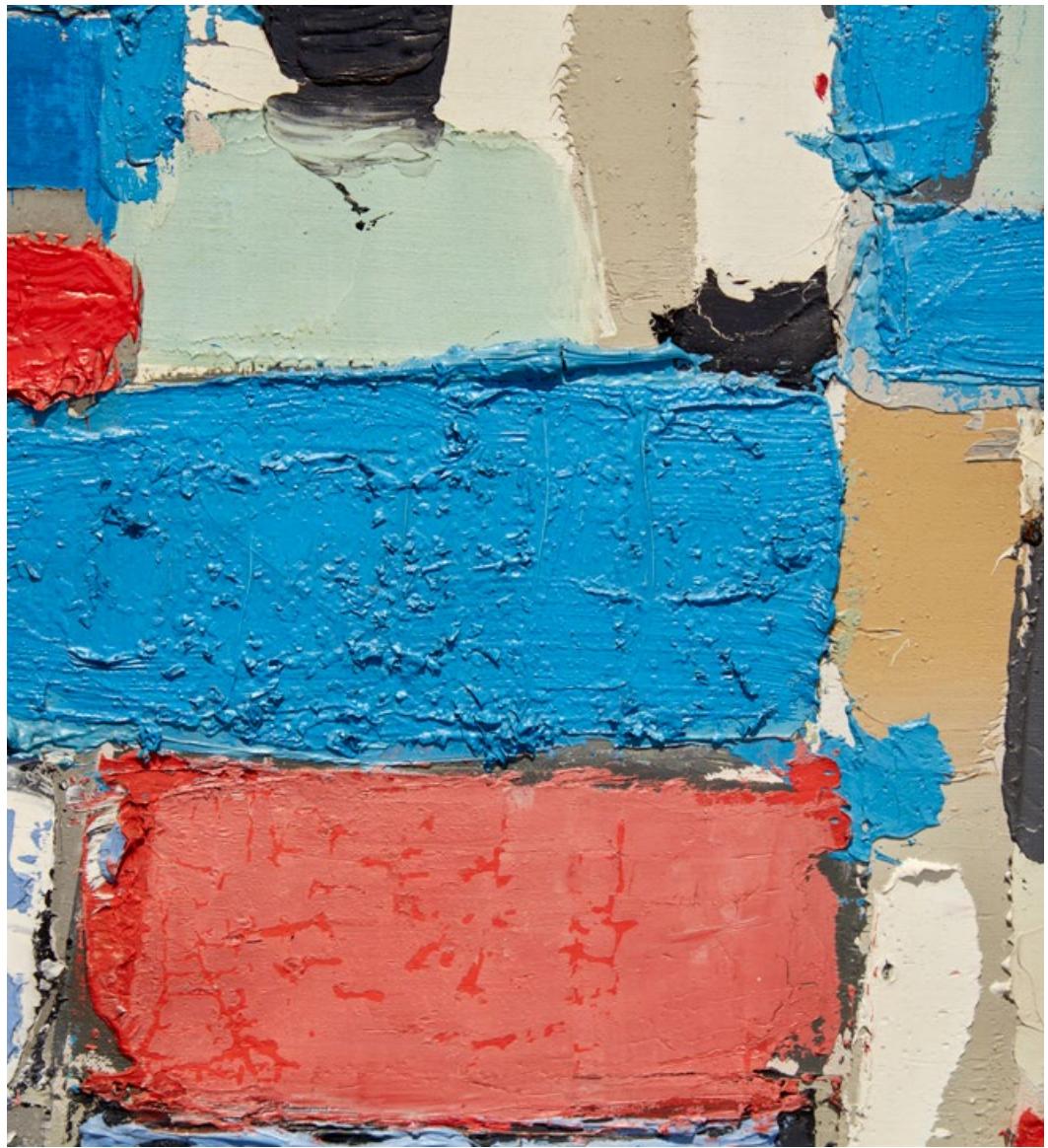
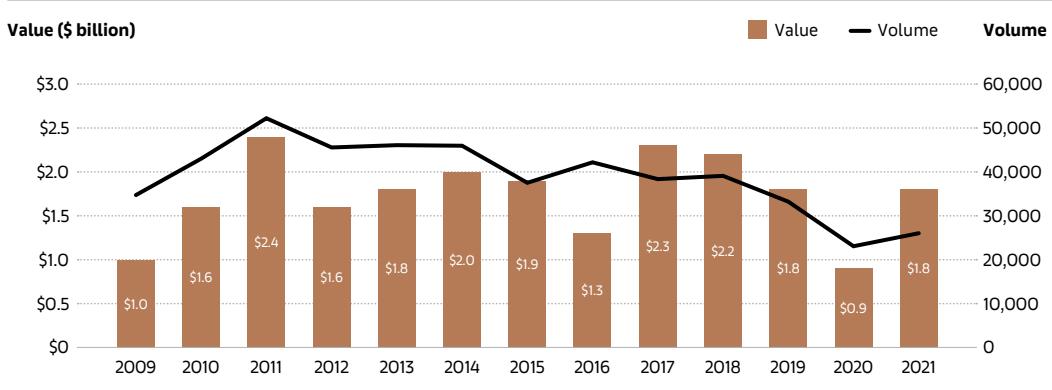
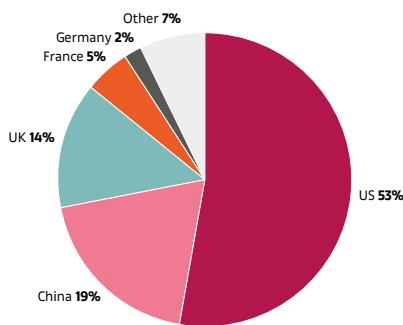
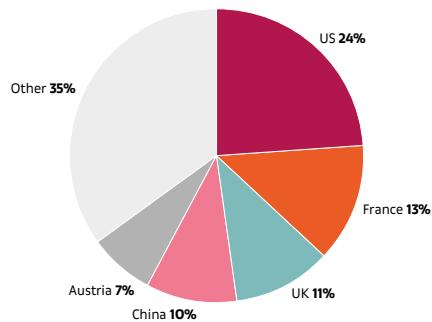


Figure 3.33 | Impressionist and Post-Impressionist Auction Sales 2009–2021

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3.7 | Impressionism and Post-Impressionism

Sales of Impressionist and Post-Impressionist art accounted for 15% of the value of sales in the fine art auction market in 2021, up by 5% year-on-year, and 12% of the volume of global fine art lots. These sales are strongly influenced by supply at the high end of the market, and the sector experienced one of the largest contractions of all in 2020, as the number of lots sold for over \$1 million halved, and aggregate values declined by 51% to \$870 million. After three years of declining values, this brought the market to a 15-year low, 11% below the recession of 2009 (\$1.0 billion), when supply at the high end also diminished during the global financial crisis. Sales recovered strongly in 2021, with a bounce-back to 2019 levels as the market doubled in value to \$1.8 billion and the number of lots sold rose by a more moderate 14%. Even with this strong recovery, the market was still below 2018 values or its peak in 2011, when, buoyed by a booming Chinese market, the sector reached \$2.4 billion. However, it has risen in value by 9% measured over the decade to 2021.

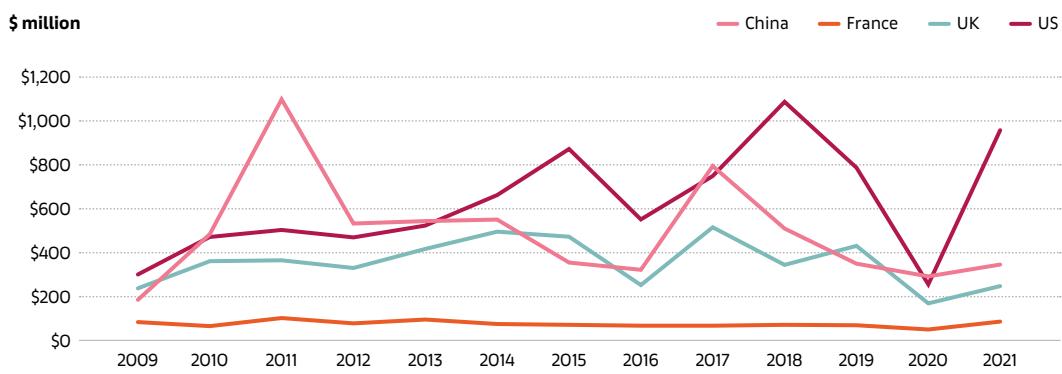
Figure 3.34 | Market Share of the Impressionist and Post-Impressionist Sector in 2021**a. Sales by Value****b. Number of Lots Sold**

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The US was the strongest performing market in the sector in 2021, with a rise in sales of 275% from their 15-year low in 2020. Sales reached \$958 million in 2021, which although still below the peak of the market in 2018 (at \$1.1 billion), was higher than any other year besides that in the last 15 years. The strong performance restored the US to its premier position with a market share by value of 53%, up by 24% year-on-year and higher than in 2019 (45%). It also had the highest proportion of lots sold globally at 24%, stable on 2020.

Sales in China also increased, rising by 18% to \$345 million, and bringing the market close to the level of 2019 after a drop in values in 2020 of 16%. Its more moderate recovery versus the US saw its share slip back to 19% by value (down by 14% year-on-year). Sales were only around a third of the values achieved at its peak in 2011 (\$1.1 billion), but have advanced considerably over the longer-term, more than doubling in size from 2009 (\$184 million), the start of China's market boom.

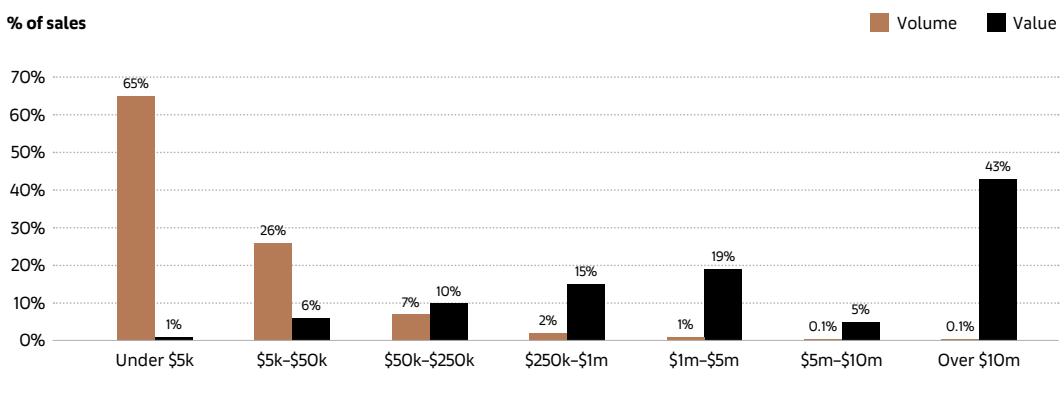
After a fall in sales of 61% in 2020, bringing the market to its lowest level in 15 years, sales in the UK rose by 47% in 2021 reaching \$247 million. Despite this improvement, values were still below the level of 2019, and its global share fell by a further 5% year-on-year to 14% by value and 11% of lots

Figure 3.35 | Sales in the Impressionist and Post-Impressionist Sector Key Markets 2009–2021

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sold. From a similar 15-year low in 2020, sales in France rose by 77% to \$86.1 million, the highest level the market has achieved since 2013. France accounted for 5% of global sales by value and 13% of the number of transactions, both relatively stable on 2020. These strong sales, along with double-digit growth in Germany, Italy, and some other mid-sized markets, ensured a rise in EU sales (of 59% in value). However, the outsized performance of the US meant that the share in the region actually declined from 13% in 2020 to 10% in 2021 (with both years measured without the UK).

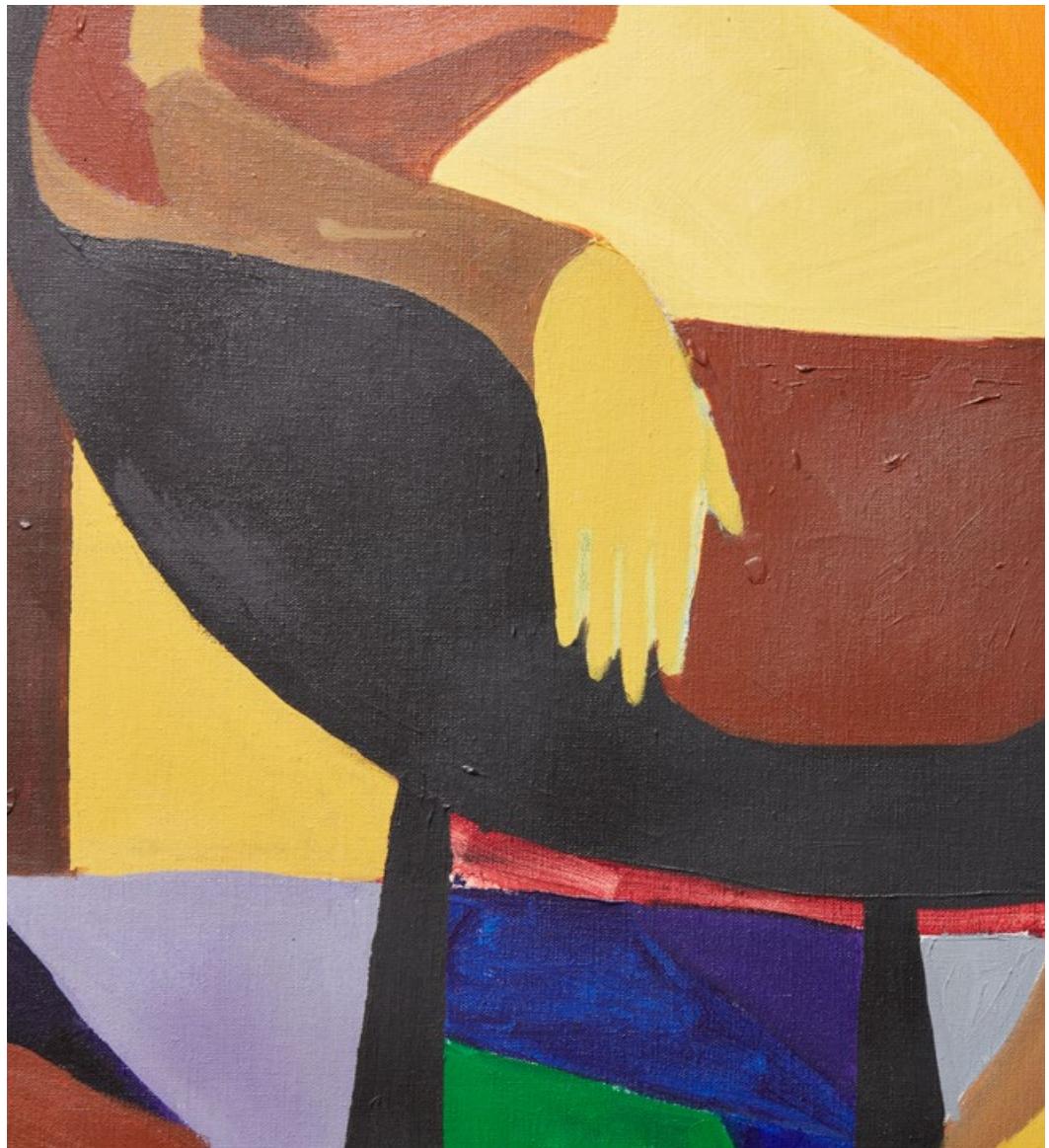
The highest-selling artists in this sector in 2021 were Claude Monet, with sales of close to \$305 million accounting for 18% of total values, and Vincent Van Gogh with a 14% share. These two artists also had the highest-priced lots, including Van Gogh's *Cabanes de Bois Parmi les Oliviers et Cyprès* (1889) which was sold for \$71.4 million at Christie's New York as part of a major sale of Impressionist works in The Cox Collection in November. The second-highest price in the sector was Monet's *Le Bassin aux Nymphéas* (1917-1919) sold at Sotheby's in New York for \$70.4 million. The top five artists in the sector, which also included Qi Baishi, Paul Cezanne, and Pierre-Auguste Renoir, accounted for just over half (51%) of the value of the market in 2021, up from 40% in 2020, and the top 20 also grew (by 9%) to 77% of total sales, again showing a higher level of concentration of sales at the top.

Figure 3.36 | Sales by Price Bracket in the Impressionist and Post-Impressionist Sector in 2021

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This sector saw significant changes in the distribution of prices during the pandemic. Hesitant and risk-averse vendors contributed to a severe contraction at the high end in 2020, with lots sold for over \$1 million falling from 60% of the value of sales in 2019 to 43%. However, it was also this segment that drove the recovery in 2021, with the share rising again to a high of 67%, with the largest segment and the greatest rise in sales being works sold for over \$10 million. This segment had fallen from 30% in 2019 to only 7% of sales in 2020 but became the largest by value in 2021 at 43%. Sales values increased to over 10 times their size from 2020 to 2021 and the number of lots sold for over \$10 million increased from three to 27. Despite these dramatic fluctuations, most lots (91%) were still sold at the lower end for prices of less than \$50,000. The share of value these lower-priced works accounted for rose from 2% to 7% in 2021 as the middle tiers diminished in size.

Christie's was the leading auction house in the sector accounting for 42% of sales, with Sotheby's responsible for a further 28%. Along with China Guardian, Poly Auction, and Beijing Rongbao, the top five auction houses accounted for 84% of the value of sales (up by 13% year-on-year), but a smaller 35% of the number of works sold.

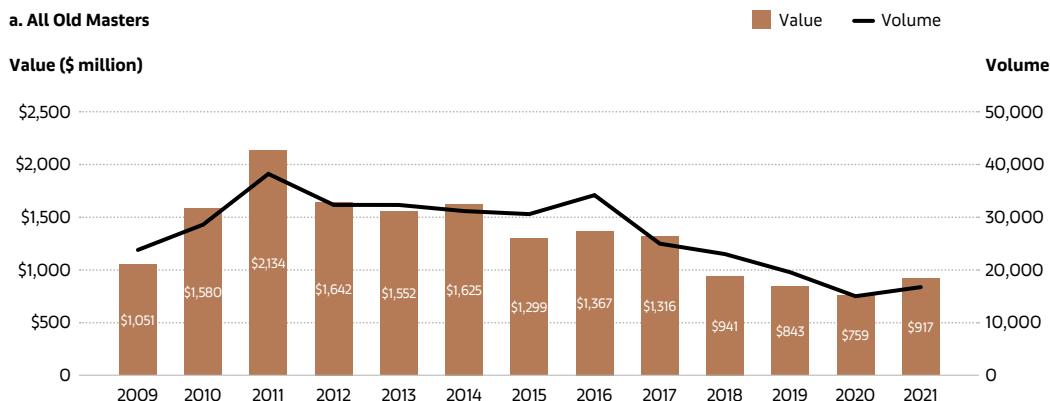
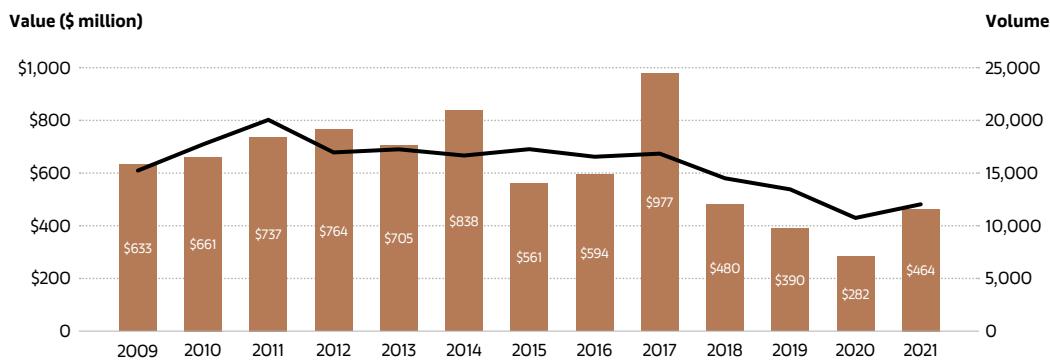


3.8 | Old Masters and European Old Masters

The Old Masters sector represented the smallest sector of the fine art auction market, with a share of 8% of the value of sales and 7% by volume, both relatively stable year-on-year. This sector covers works sold by artists of all nationalities born between 1250 and 1820, although the term 'Old Masters' is most commonly associated with the works of European artists. The share of European Old Masters was 4% by value and 5% of the number of transactions in the fine art auction sector. Sales of Chinese Old Masters have had a substantial impact on the wider sector in the last 10 years, and six out of 10 of the top-selling artists were the work of Chinese artists. In 2020, these top-selling artists, along with a significantly better year for auction sales in China than in other regions, pushed the proportion of European Old Masters in the Old Masters segment to just 37% (and 70% of the number of lots sold). However, in 2021, sales outside of China saw greater year-on-year growth, and high prices were achieved for some traditional European Old Masters. These notably included Sandro Botticelli's *Portrait of a Young Man Holding a Roundel* (1444/5 – 1510) for \$92.2 million at Sotheby's, a record for the artist, and the second most expensive Old Masters work ever sold, as well as being the third-highest lot price across the entire fine art auction market for 2021. This boosted the share of European Old Masters to 51% of the value of sales in Old Masters in 2021 (while the number of lots sold were relatively stable at 72%).

After four consecutive years of declining values, sales of all Old Masters works increased by 21% in 2021 to \$917 million, driven by these strong sales at the high end of the market and some increase in volume (with the number of transactions rising by 12%). This sector fell more moderately than others in 2020, with a decline of just 10% year-on-year, but its consistent declining trend over several years meant it had reached its lowest level in over 15 years. The recovery in 2021 restored the market to close to 2018 levels, but values were still less than half of the peak in sales in 2011 at \$2.1 billion at the height of the boom in China. Values also remained 44% below their level a decade previous in 2012.

Values in the European Old Masters sector also increased in 2021, with a stronger advance year-on-year of 65% to \$464 million, driven again by a very small number of highly priced lots and a more moderate increase in the volume of sales (12%). This segment reached its lowest level in more than 15 years in 2020, declining 28% in value that year, and having shrunk to half its size in a decade as the thin supply of high-quality masterpieces in commercial circulation limited growth

Figure 3.37 | Old Masters Auction Sales 2009–2021**a. All Old Masters****b. European Old Masters**

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despite ample demand when they did appear on the market. Like the wider sector, the increase in value in 2021 brought the market back to around 2018 levels, but still nearly half that of the peak in 2017 of \$977 million, and 39% below their level a decade previous in 2012.

Table 3.3 | Global Market Share: Old Masters Auction Market in 2021

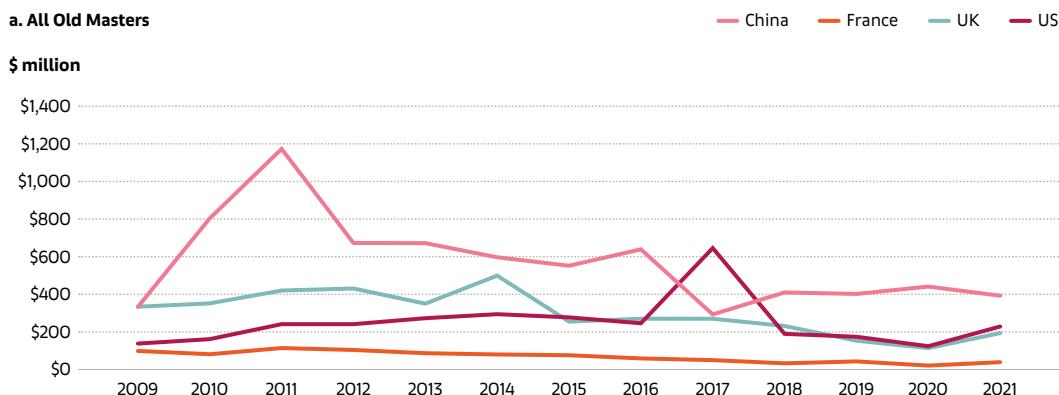
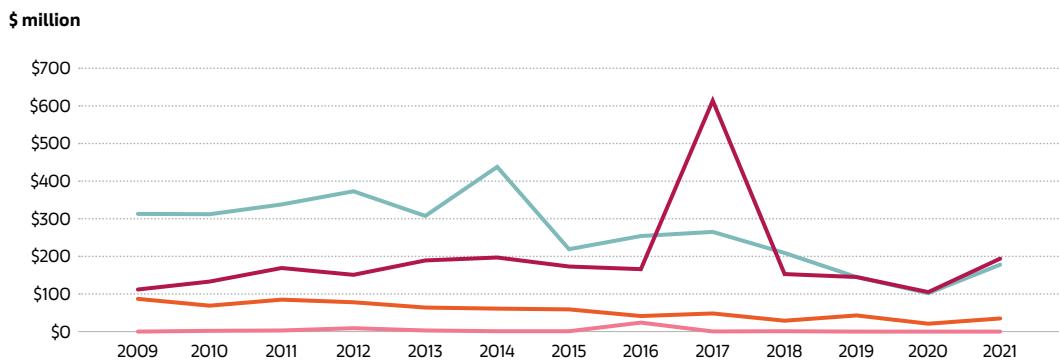
Old Masters		European Old Masters			
Country	Share of Value	Share of Lots Sold	Country	Share of Value	Share of Lots Sold
China	43%	15%	US	42%	22%
US	25%	20%	UK	38%	19%
UK	21%	19%	France	8%	13%
France	4%	11%	Austria	4%	9%
Austria	2%	7%	Germany	3%	15%
Other	5%	28%	Other	5%	22%

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China remained the largest market for sales in the wider Old Masters sector in 2021, although its share by value declined by 15% to 43% (and 15% of lots sold). Sales in China ran contrary to the declining trends in other sectors in 2020 by advancing 10%, boosted by a small number of very highly priced lots. However, this was reversed in 2021 with a decline of 11% to \$393 million. Sales were still less than half the level of the peak in China in 2011, when they had reached \$1.1 billion, but have seen significant growth over the longer term, with sales only ever exceeding \$50 million for the first time in 2007.

Sales in the US Old Masters auction market advanced by 85% year-on-year in 2021 to \$229 million, their highest level since the peak in 2017 of \$646 million, when the market increased 162% in value, driven solely by the one extremely highly priced Leonardo da Vinci lot (without which sales would have declined by 21%). It was the second-largest market in the wider sector, with its share of value increasing by 9% in 2021 to 25%, and a more moderate gain in the volume of sales to 20%.

The UK was in third place in the wider Old Masters sector, and its share of global sales by value advanced by 6% to 21% (with a stable 19% of the number of lots sold). After three years of decline, sales increased by 70% to \$194 million, exceeding values of the last two years but still not achieving the level of 2018 (\$235 million) and less than half its peak in 2014 of \$499 million. After halving in size in 2020 and reaching a 15-year low, sales in France recovered well in 2021, with a substantial rise in values of 82% to \$39 million, although still below the level of 2019 (\$43 million). EU sales (measured without the UK) saw a 26% increase, although without the UK their global share of values were just 9%.

Figure 3.38 | Sales in the Old Masters Sector Key Markets 2009–2021**a. All Old Masters****b. European Old Masters**

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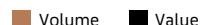
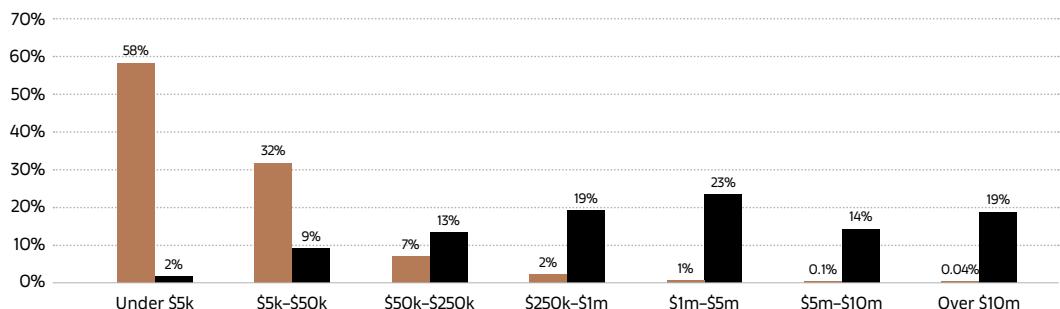
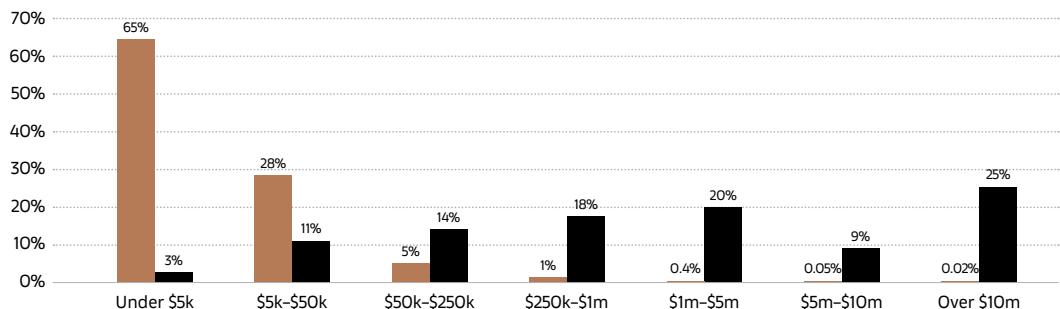
In the European Old Masters sector, sales in all of the major art markets rose significantly year-on-year, recovering most of the losses of 2020. The US was the largest market, with 42% of sales by value, up by 5% year-on-year. Sales there increased 84% to \$194 million, with an equally strong advance in the UK of 75% to \$178 million. The UK had traditionally been the largest market in this sector with more than half of the sales by value in 2014, but lost share to the US

in more recent years, and accounted for 38% of sales by value in 2021 and 19% of lots sold. Sales across the EU in this sector rose by 20% year-on-year (measured without the UK in both years), but they accounted for a smaller proportion of global values (17%, down by 7% year-on-year).

The highest-selling artist in the sector, achieved through the sale of only one lot at auction, was Sandro Botticelli, whose \$92 million work mentioned above represented a 10% share of the market by value. As noted above, sales of Chinese artists' works have been an important part of this sector for the last decade, and the remaining top five artists were Chinese, including Zhou Zhimian, Yun Shouping, Dong Qichang, and Hongren, who together accounted for a further 8%. The top 20 artists made up only 36% of the total sales values, less concentrated than other sectors, and also a lower share in this sector than in 2020, when they accounted for 55%.

Notable high-priced lots included Zhou Zhimian's *Flora* which sold for \$23.3 million at China Guardian in Beijing, and Hongren's album of 19 ink on paper works, *Landscapes and Calligraphies* selling for \$16.5 million at Sotheby's Hong Kong SAR (China). Botticelli was also the highest-selling artist in the European Old Masters where his share of sales was more concentrated at 20%. The top five artists (which also included Anthony van Dyck, Bernardo Bellotto, Leonardo da Vinci, and Jean Baptiste Simeon Chardin) accounted for 31% of sales by value with the top 20 accounting for 49%. Besides the record price for Botticelli's work, two other lots selling for over \$10 million included Bernardo Bellotto's *View of Verona with the Ponte delle Navi* (1745-1747) for \$14.6 million at Christie's in London and Leonardo da Vinci's *Head of a Bear*, sold for \$12.2 million also at Christie's in London.

These high-value lots boosted the share of sales at the higher end of the European Old Masters sector, with works sold for over \$1 million making up 54% of sales by value, up from 39% in 2020. The largest segment by value in this sub-sector was works sold for prices over \$10 million (25%, up from 11% in 2020), and this segment grew in value by over 350% year-on-year. Most lots (93%) continued to be sold at prices of less than \$50,000 and sales at this level grew more moderately, increasing by 12% in value over 2021.

Figure 3.39 | Sales in the Old Masters Sector by Price Bracket in 2021**a. Old Masters**

**b. European Old Masters**

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In the wider Old Masters sector, works selling for over \$1 million accounted for 56% of the value of sales, up by just 2% year-on-year. This sector went against the trend of most others in that the highest end of \$10 million-plus lots saw the poorest performance of all segments year-on-year. While works selling for between \$1 million and \$10 million rose in value by 47% from 2020 to 2021, the top segment of works priced at over \$10 million experienced declining sales of 14% (with 5% less lots sold at this level). The decline was partly due to the unusual boost in 2020, which again ran counter to other sectors by increasing in value, with sales doubling in size from 2019 to 2020.

This activity at the high end underlines the importance of the presence or absence of a very small number of highly priced works on trends in this sector. While this is true of most sectors of the fine art market, the scarcity of high-quality Old Masters masterpieces coming onto the market means that their appearance has a more dramatic effect on annual trends.

Sotheby's and Christie's were the largest auction houses by value of sales in the wider Old Masters segment, with a combined share of 55%. Together with China Guardian, Poly Auction, and Xiling Yiinshe Auction Company, the top five auction houses accounted for close to 90% of sales values (up by 10% year-on-year). Sotheby's and Christie's also led in the European Old Masters sector, but with a much more dominant share of 83% of sales by value. With the other three top-selling auction houses (Dorotheum, Koller Auctions, and Bonhams), the top five houses accounted for 91% of the value of sales, up by 4% year-on-year, as well as 44% of the lots sold.

The scarcity of high-quality Old Masters masterpieces coming onto the market means that their appearance has a more dramatic effect on annual trends

Collectors

4



Key Findings

Collectors

- 1.** Surveys of 2,339 HNW collectors conducted by Arts Economics and UBS Investor Watch across 10 markets showed their spending increased substantially in 2021, reinforcing their importance in maintaining the strength of the art market during the pandemic. The median expenditure on fine art, decorative art, and antiques rose from \$72,000 in 2019 to \$126,000 in 2020, before more than doubling in 2021 to \$274,000.
- 2.** In 2021, just over one third of HNW collectors had spent over \$1 million on art and antiques, up from 20% in 2020 and more than double the level in 2019. Mainland China had the highest share of spending at this level (44%), and there were also high levels in Germany (38%), France, and the US (both 36%).
- 3.** While traditional mediums dominated in terms of value in 2021, 11% of HNW collectors' spending was on digital art. A small number of young collectors spent significant amounts on digital art, with 5% of Gen Z and 4% of millennial HNW collectors having spent over \$1 million.
- 4.** 74% of HNW collectors had purchased art-based NFTs in 2021. For those who had purchased NFTs, the median number summed over all categories was 13, including four related to art. The median expenditure across all NFTs was \$24,000, with 37% of that (or \$9,000) on art.

Collectors

5. Dealers remained the most commonly used channel for purchasing art in 2021, with 76% of HNW collectors having purchased via a gallery or dealer in some format. The shift to online was clearly evident, with buying directly through a dealer's website or OVR the most widely used (44%), while 42% reported accessing sales from galleries or other physical premises.

6. HNW collectors reported that 46% of their total spending in 2021 was at dealers, galleries, or art fairs and 20% at auctions. The spending at art fairs was split between live events (9%) and OVRs (7%), while sales at dealers were divided between their galleries (13%), their websites or OVRs (10%), and 7% by phone or email.

7. Apart from being the most widely used, dealers and galleries were also the first preference for most HNW collectors when it came to buying art. 40% preferred to buy from a dealer, and a further 15% chose purchasing from dealers at art fairs. Despite the evidence of greater acceptance and use of online sales and exhibitions, if choosing between offline and online experiences, most collectors (69%) preferred live or in-person viewing at a gallery or fair, while 19% preferred OVRs or exhibitions, and 12% were indifferent.

4.1 | Global Wealth in 2021

After the widespread crisis and severe contraction in economic growth in 2020 due to the COVID-19 pandemic, 2021 brought a year of recovery and expansion. Overall, macro growth and performance exceeded expectations, largely due to a combination of fiscal supports and the deployment of vaccines. Although the Omicron variant and resurgence of renewed restrictions served as a stark reminder at the end of the year that the pandemic was far from over, the economic effects were not as disruptive as previous waves due to less severe and more tailored restrictions imposed, stronger consumer confidence, and adaptions businesses and individuals had already made to operating in new and restricted contexts.

After the widespread crisis and severe contraction in economic growth in 2020 due to the COVID-19 pandemic, 2021 brought a year of recovery and expansion

The rollout of successful vaccine campaigns did much to limit the damaging effects of the pandemic in 2021, however, there have been vastly different vaccine rates in low- versus high-income countries. According to the World Bank, at the end of 2021, just over 7% of people in low-income countries had received a dose of the vaccines compared to over 75% in high-income countries, leading to a disproportionate impact from COVID-19 on poorer and more vulnerable regions.⁴⁴ This gap has run alongside a parallel gap in the recovery between low- and high-income economies, with the latter growing at a much faster rate, and an increasing divide in wealth, with the richest in society gaining a greater share. Rising wealth inequality generally leads to a change in spending patterns over time and can introduce opportunities for businesses at both ends of the economic spectrum. Higher growth and an increasing concentration of wealth among the top percentiles of wealth-holders have undoubtedly helped to boost spending on art and antiques. However, the trends to increasing inequality have also resulted in a thin, narrow market (by value) where much of the successful performance has been concentrated at the high end, making it susceptible to certain risks and limitations.

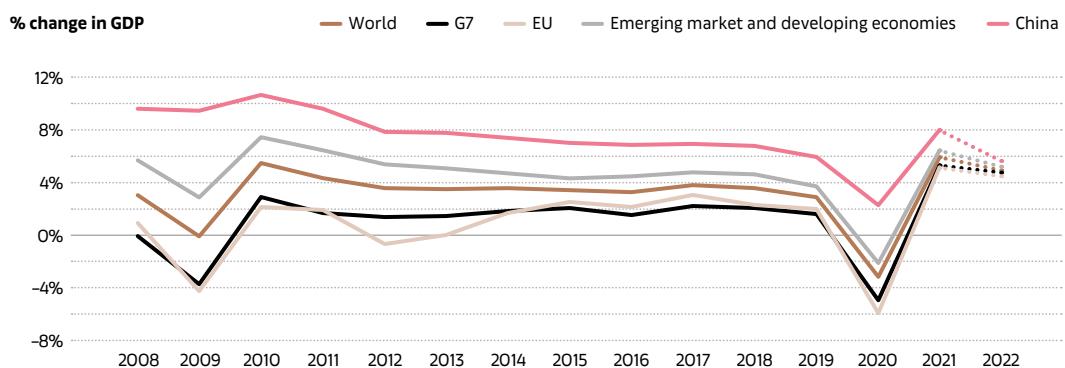
⁴⁴ World Bank (2021). '2021 Year in Review in 11 Charts: The Inequality Pandemic', available at [worldbank.org/en/news/feature/2021/12/20/year-2021-in-review-the-inequality-pandemic](https://www.worldbank.org/en/news/feature/2021/12/20/year-2021-in-review-the-inequality-pandemic).

There have also been uneven recoveries between industries, with some of the worst affected continuing to be those connected to travel and events, with the art market having been particularly vulnerable. Even in other industries, however, as restrictions relaxed and demand boomed, supply was slow to respond in some cases, with supply chain disruptions and shortages in different areas. Even as supply recovered over 2021, the large stock of savings from the pandemic created excess demand, which helped to fuel rapidly rising inflation, with prices increasing more than any year since 2008. High and rising inflation presents risks with the potential for policy responses and adjustments in interest rates, affecting consumer spending and corporate margins. How persistent this inflation is going to be in 2022 is not known with certainty, although experts believe that currently elevated rates should subside over the course of the year, as balances in supply and demand are restored, energy prices stabilize, and labor market shortages and other frictions ease. This in turn should be good for equity markets as risks to corporate margins are lowered and the threat of sudden interest rate hikes reduced.⁴⁵

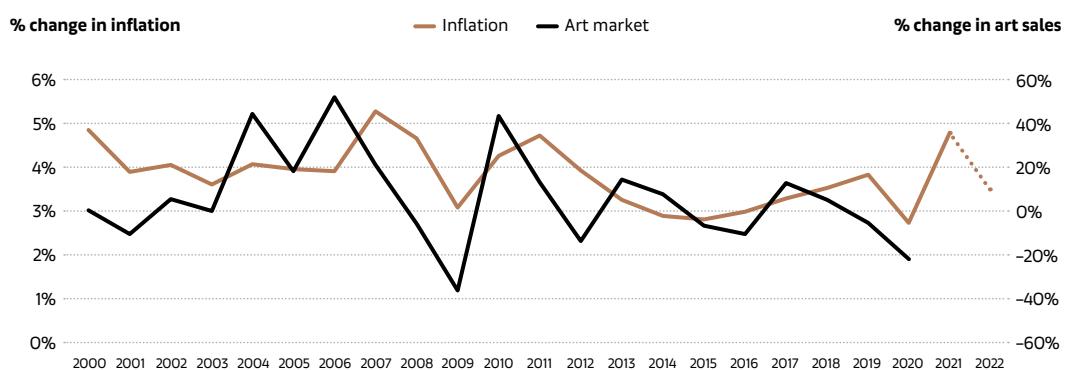
Although empirical studies have shown mixed results, periods of higher inflation, should they persist, are not always necessarily detrimental to the art market, with real assets, including art, seen as offering investors protection (or a hedge) while diversifying their portfolios. Over the past decade, as inflation has been historically low, many real asset markets have seen lower returns and volatility relative to financial markets, keeping their prices more subdued and making them more attractive investments. Some real assets are often positively correlated with inflation and interest rates, unlike financial assets. Although the actual evidence is mixed for art, this could have encouraged buyers and sellers to pursue these assets with the belief that it was a good time to invest.

Despite inflationary and other pressures, the boom in demand helped to generate strong earnings growth and equity markets also performed relatively well over 2021, with indices such as the S&P500 rising by 27% over the year, as spending and earnings stayed strong and interest rates remained low. Again, the possibility of policy responses to more persistent inflation is one risk for these markets over the next year, along with other factors such as slower economic growth, wealth redistribution policies to combat inequality, climate-related policies, and other regulations that were the focus of much attention in 2021. All of these factors could present challenges in the years ahead, and the resilience of equity markets through this crisis has been critical in helping to preserve and enhance wealth, directly fueling some of the activity of HNW collectors in the art market.

⁴⁵ Expert predictions from UBS (2021). 'Year Ahead', *UBS House View*.

Figure 4.1 | Growth and Estimates in Regional and World GDP 2008–2022

© Arts Economics (2022) with data and forecasts from the IMF

Figure 4.2 | Change in Consumer Prices (Inflation) and Sales in the Art Market 2000–2022

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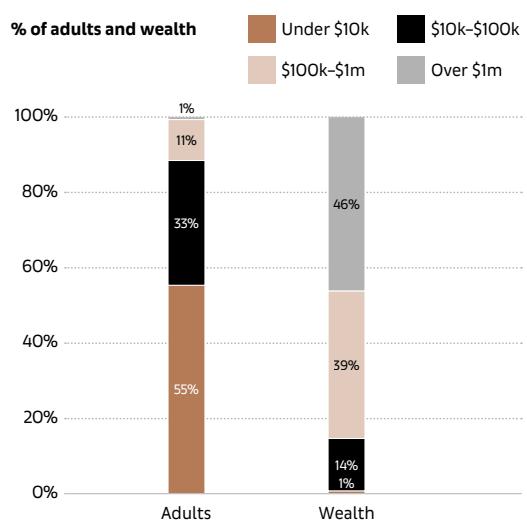


4.2 | Wealth Distribution and Millionaires

After the initial shock of the pandemic in early 2020, growth in wealth, particularly at the high end, was significantly higher than expected in the second half of that year. This continued into 2021, leveraged by strong growth in equity markets and property valuations. At the start of 2021, millionaires accounted for a stable 1% of the world's population but the wealth they owned expanded three percentage points to 46% of world wealth, as the pandemic contributed to an increase in inequality.⁴⁶ While in previous crises and periods of high volatility, high net worth individuals (HNWIs) often sought to preserve wealth by allocating it to safer asset classes such as fixed income securities and cash, in 2020 and 2021, many invested actively in high-growth equities after their initial crash in March 2020, with the expectations of positive growth and recovery, and the understanding that the current crisis was not essentially financial in nature. Certain key industries such as technology, fashion, and retail also helped to buoy the wealth of some investors.

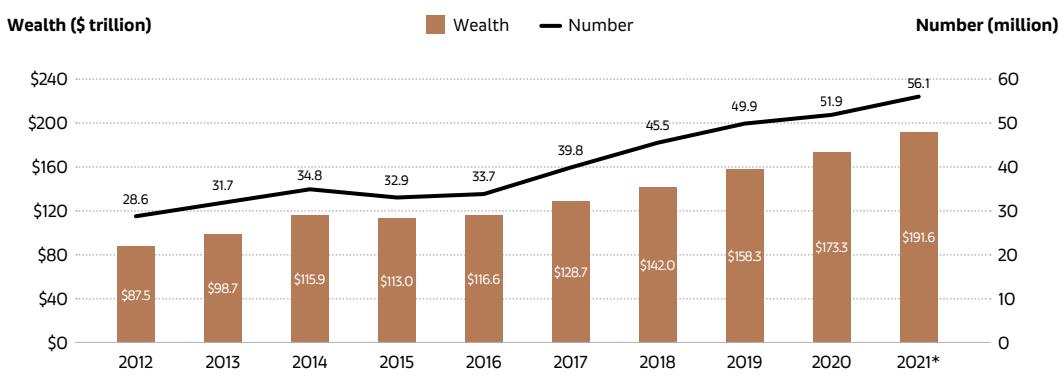
At the start of 2021, millionaires accounted for a stable 1% of the world's population but the wealth they owned expanded to 46% of world wealth

Figure 4.3 | The Distribution of World Wealth in 2021



© Arts Economics (2022) with data from Credit Suisse

⁴⁶ Estimates of millionaires are from Credit Suisse (2021) 'Global Wealth Report', and previous editions of Credit Suisse Wealth Databooks. Millionaires refer to those with net wealth in excess of \$1 million, defined as financial and non-financial assets (including property and other physical assets) less debt.

Figure 4.4 | Number and Wealth of Dollar Millionaires 2012–2021

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The number of millionaires (measured at the start of 2021) was 56.1 million with wealth of \$191.6 trillion, up by 8% and 11% year-on-year respectively. Wealth in Figure 4.4 includes property and other physical assets, and as property prices rose along with inflation in other personal assets, the dollar millionaire bar also became lower for new entrants. However, looking only at purely investable assets (excluding personal assets and property), a similar pattern of growth is evident, with both wealth and the population of HNW individuals growing in the last two years.⁴⁷

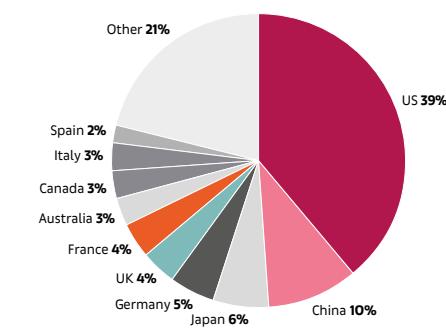
The US maintained the highest millionaire population, with a stable 39% of the world total. The number of millionaires in the US reached just under 22 million, an increase of 9% year-on-year with the addition of 1.7 million new millionaires, over one third of the world's new additions. China, including Mainland China and Hong Kong SAR (China), accounted for 10% with a further 1% in Taiwan. While the number of millionaires in Mainland China grew by 5% to 5.3 million, those in Hong Kong SAR (China) fell by 7% to 520,000. The other large millionaire bases such as Japan, Germany, Australia, the UK, and France all saw a rise in millionaires over 12 months, while the main countries declining were Brazil, India, and Russia.

⁴⁷ Data from Capgemini (2021) 'World Wealth Report 2021' on HNWI with investable assets (excluding property and other personal physical assets) expanded by 8% to \$79.6 trillion by the end of 2020, while the population in this segment also rose 6% to 20.8 million.

Growth in the number of millionaires is also expected to maintain strong and positive momentum over the coming years, with forecasts of the population increasing to over 84 million by 2025, driven by growth in lower-income countries outside the US and Europe. While the number of millionaires is expected to grow by up to 28% in the US, in regions such as China and India, this increase is expected to surpass 80%, underlining their important potential for growing numbers of art collectors in future. In nations such as the US, millionaires already make up around 9% of the population (and as high as 15% in Switzerland), while in Mainland China and India this density is still less than 1%.

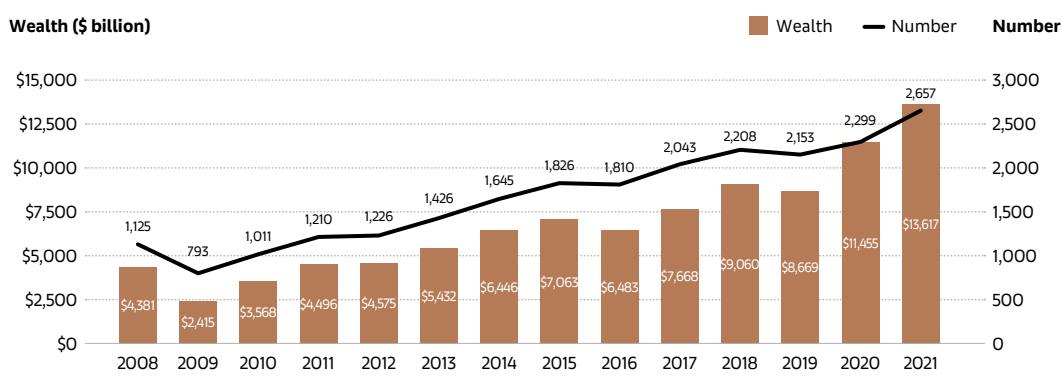
Moving up the wealth spectrum, the global population of those with net worth exceeding \$50 million reached approximately 215,035 including around one third with wealth over \$100 million. The population in the \$50 million-plus segment grew by 22% year-on-year to 2021. The US and China, including Mainland China and Hong Kong SAR (China), accounted for the majority, with a global share of 52% and 14% respectively. Both saw an increase year-on-year, with the US adding 21,220 individuals to this segment and Mainland China just over 5,700, and together constituting close to 70% of the increase in the world's \$50 million-plus population. Germany, the UK, and Japan accounted for a combined 10% of the world's population in this top millionaire segment.

Figure 4.5 | Global Share of the Population of Dollar Millionaires in 2021



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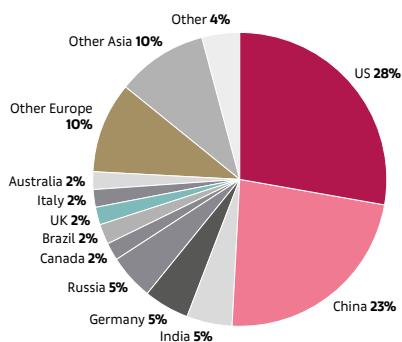
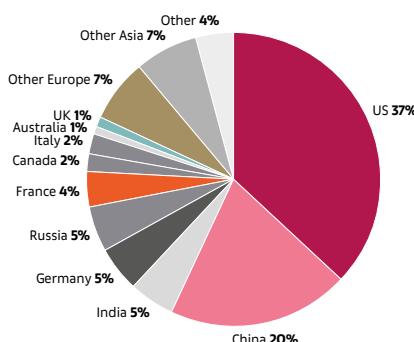
Figure 4.6 | Number and Wealth of Billionaires 2008–2021

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4.3 | Billionaires in 2021

Despite the devastating effects of the pandemic, billionaires around the world saw a significant boost to their wealth of almost one third in 2020. This continued in 2021 with the number of billionaires and their wealth rising even further. The ballooning wealth of the world's richest individuals has undoubtedly helped the art market weather the prolonged effects of the COVID-19 crisis much better than it otherwise would have, with many of these wealthiest individuals being important collectors of art.

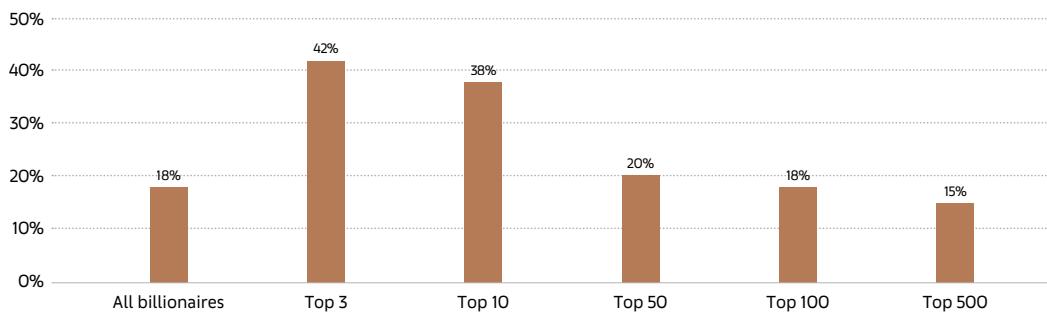
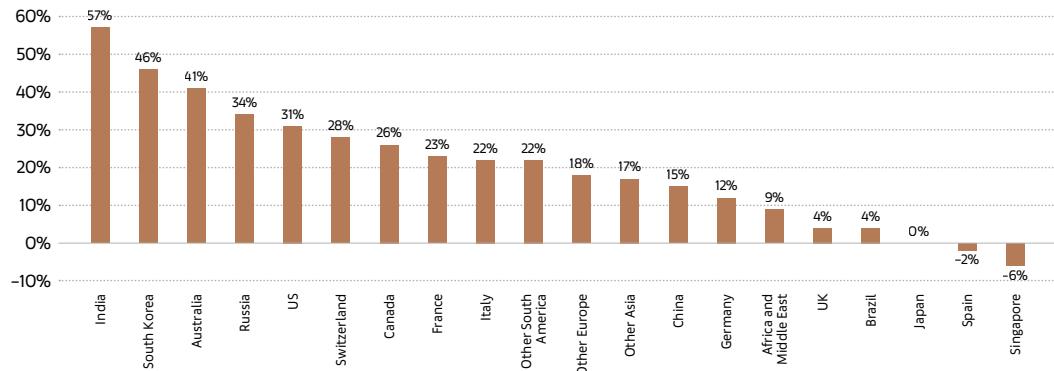
Using *Forbes World's Billionaires* lists (compiled since 1987), in December 2021, there were an estimated 2,657 billionaires with combined wealth of \$13.6 trillion, up by 16% and 19% respectively on the same period in 2020. The continued growth of this segment highlights the major differences between the current pandemic and other previous financially based crises for the ultra-wealthy. Most notably, in 2009, in the fallout from the global financial crisis, the number of billionaires worldwide fell by 30% and their wealth plummeted by 45%.

Figure 4.7 | Global Share of Billionaires in 2021**a. By Population****b. By Wealth**

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The US continued to have by far the largest number of billionaires in the world, with a stable share of 28% of the global population, followed by China, including Mainland China and Hong Kong SAR (China), at 23%. The number of billionaires in the US rose to 737 by the end of 2021, an increase of 13% from the previous year. The advance in China was even larger, with a rise of 28% to 623, driven solely by the expansion of the population in Mainland China (up by 34%, versus a slight drop in numbers in Hong Kong SAR (China) from 69 to 65). India, Germany, and Russia were again in the top five, with a combined share of 15% of the billionaire population, all with advancing numbers year-on-year.

The US also had the largest share of global billionaire wealth (37%), with an increase of more than 30% year-on-year to \$5.1 trillion in 2021. China was second largest with a 20% share, and the wealth of Chinese billionaires increased by a more moderate 15% (to \$2.7 trillion). Indian billionaires experienced one of the biggest gains in wealth, with an increase of 57% to \$716 billion, bringing it slightly ahead of Germany in terms of both the number of billionaires and their wealth. Other big gainers included Australia (+41%) and South Korea (+46%), while regions losing wealth over the period included Singapore (-6%), Malaysia (-6%), and Thailand (-5%).

Figure 4.8 | Changes in Billionaire Wealth December 2020–December 2021**a. Change in Wealth by Rank****b. Change in Wealth by Region**

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Aside from differences by region, the divide between the very top, wealthiest individuals and other billionaires continued to expand. As was the case in 2020, those individuals holding assets in key growth sectors such as technology, e-commerce, and pharmaceuticals continued to build wealth at a very rapid pace, and the wealth of the richest in the billionaire lists grew faster than the wider cohort.

During the period from December 2020 to December 2021, the top three wealthiest billionaires increased their wealth by 42% (and by over 200% since the beginning of the global pandemic in March 2020). The top 10 billionaires increased their wealth by 38% (and 128% since March 2020) versus a rise of 16% for all other billionaires (without those 10 individuals).

Women still made up a minority of billionaires worldwide, accounting for 12% of the total billionaire population in 2021. The number of female billionaires increased by 36% year-on-year (from March 2020 to March 2021), and their wealth also increased by almost 60% (to just over \$1.5 trillion). However, as overall billionaire wealth rose, their share of total billionaire wealth was stable at 12%. Although smaller in number, a high proportion of female billionaires are art collectors.

Women still made up a minority of billionaires worldwide, accounting for 12% of the total billionaire population in 2021

A high share of billionaires are older, with an average age of 63. However, the proportion under 50 increased by 2% in 2021 to 14%, and this segment made up 13% of total billionaire wealth. The number of self-made billionaires has also increased significantly over the last 20 years, and in 2021 they accounted for around 70% of total billionaire wealth, from less than half in 2011. Many younger billionaires have emerged from success in industries such as technology, e-commerce, gaming, cryptocurrencies, and other high-growth areas. Many of these individuals are also active in the markets for art and luxury products, and some have significant collections of art.

Apart from their self-made fortunes, more millennials and younger HNWIs are also inheriting significant wealth from an affluent generation of Boomers and older parents, which could have positive effects on the demand for art in future. Some will also directly inherit artworks and collections, with some of the largest collections of art owned by the current generation of Boomer collectors, who have been very active in the market over the last 50 years. As these assets are transferred, it remains highly likely that a lot of this art will come onto the market as tastes diverge or due to the difficulty of dividing estates, which could also increase supply. Some dealers in key cities such

as New York noted that some of the top collections owned by Boomers concentrate on a relatively small number of Modern and Post-War and Contemporary artists that have been among the most sought after on the secondary market in recent years. If some of these collections came onto the market within a reasonably short period of time, it could moderate prices as some artists' works become less scarce. However, in contrast to other asset markets where increases in supply drives prices downward, given the scarcity of high-quality works still in circulation in the art market, this increased supply (works coming up for sale) may also have a positive effect, driving the market and sales to higher levels for key artists with an important historical footprint. For some other artists, however, increased supply, if combined with changing and evolving tastes, could alter their markets more negatively.

Apart from their self-made fortunes, more millennials and younger HNWIs are also inheriting significant wealth from an affluent generation of Boomers and older parents, which could have positive effects on the demand for art in future

4.4 | HNW Collector Survey

The preferences and actions of HNW collectors are critical in determining some of the key trends in the art market. To help better understand their motivations and behavior, Arts Economics and UBS Investor Watch have monitored collectors' interactions in the market through surveys for the last five years. In 2021, this research covered 10 different markets with responses from 2,339 HNW collectors in total. The markets were: the US, the UK, France, Germany, Italy, Mainland China, Hong Kong SAR (China), Taiwan, Singapore, all of which were included in 2020, and newly introducing collectors from Brazil. Each of these markets is home to large HNW populations, and some of their key wealth and economic features are summarized below.

Figure 4.9 | HNW Collector Survey: Market Summaries

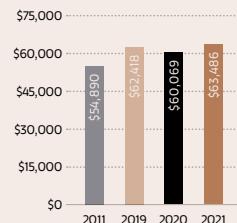
I. US

- Share of global millionaires: 39%
- Share of global billionaires: 28%
- Share of billionaire wealth: 37%

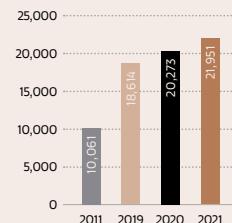
% Growth GDP



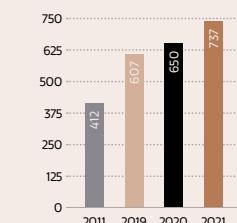
GDP pc (\$ppp)



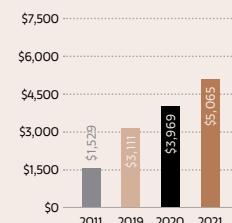
No. Millionaires



No. Billionaires



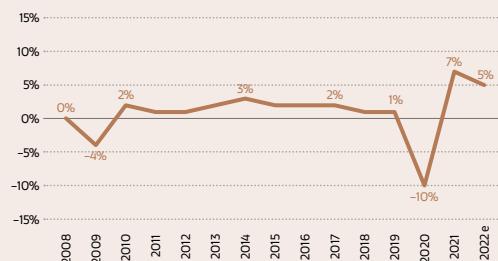
Billionaire Wealth (\$ billion)



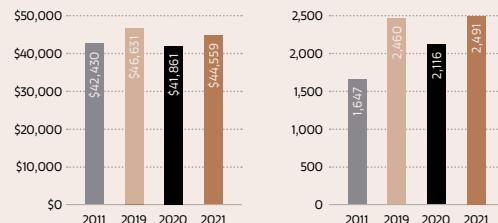
II. UK

- Share of global millionaires: 4%
- Share of global billionaires: 2%
- Share of billionaire wealth: 1%

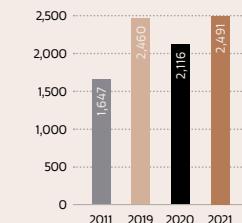
% Growth GDP



GDP pc (\$ppp)



No. Millionaires



No. Billionaires



© Arts Economics (2022) with data from the IMF, Credit Suisse, and *Forbes*

Figure 4.9 | HNW Collector Survey: Market Summaries (continued)

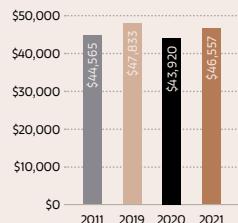
III. France

- Share of global millionaires: 4%
- Share of global billionaires: 2%
- Share of billionaire wealth: 4%

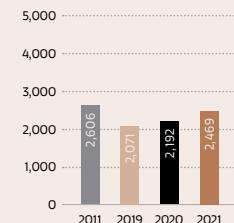
% Growth GDP



GDP pc (\$ppp)



No. Millionaires



No. Billionaires



Billionaire Wealth (\$ billion)



IV. Germany

- Share of global millionaires: 5%
- Share of global billionaires: 5%
- Share of billionaire wealth: 5%

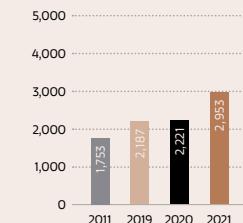
% Growth GDP



GDP pc (\$ppp)



No. Millionaires



No. Billionaires



© Arts Economics (2022) with data from the IMF, Credit Suisse, and *Forbes*

Figure 4.9 | HNW Collector Survey: Market Summaries (continued)

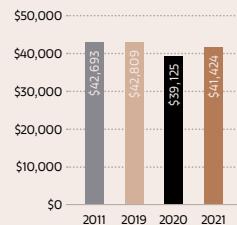
V. Italy

- Share of global millionaires: 3%
- Share of global billionaires: 2%
- Share of billionaire wealth: 2%

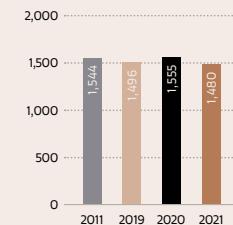
% Growth GDP



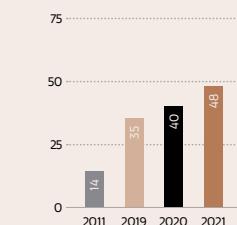
GDP pc (\$ppp)



No. Millionaires



No. Billionaires



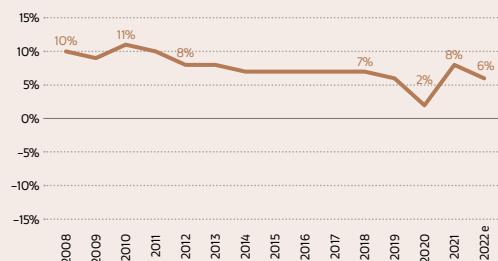
Billionaire Wealth (\$ billion)



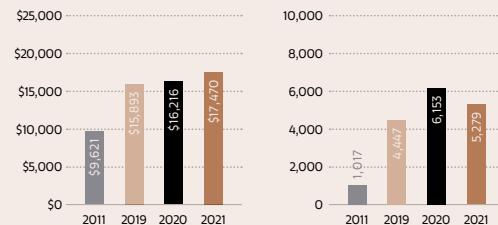
VI. Mainland China

- Share of global millionaires: 9%
- Share of global billionaires: 21%
- Share of billionaire wealth: 17%

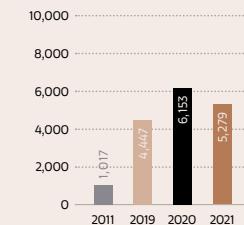
% Growth GDP



GDP pc (\$ppp)



No. Millionaires



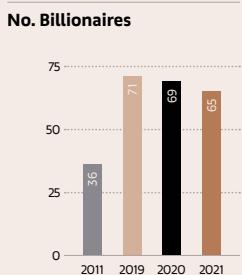
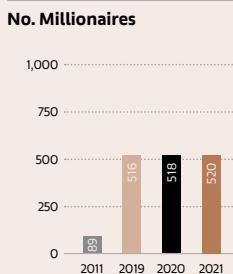
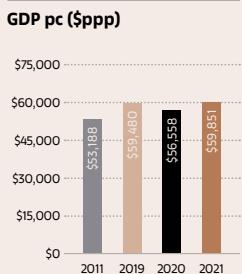
No. Billionaires



Figure 4.9 | HNW Collector Survey: Market Summaries (continued)

VII. Hong Kong SAR (China)

- Share of global millionaires: 1%
- Share of global billionaires: 2%
- Share of billionaire wealth: 3%



VIII. Taiwan

- Share of global millionaires: 1%
- Share of global billionaires: 2%
- Share of billionaire wealth: 1%

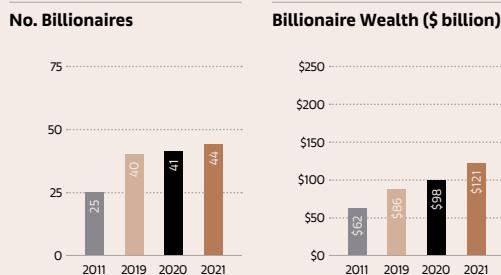
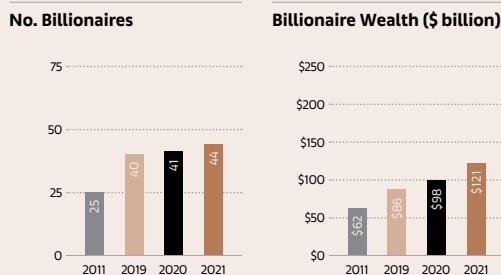
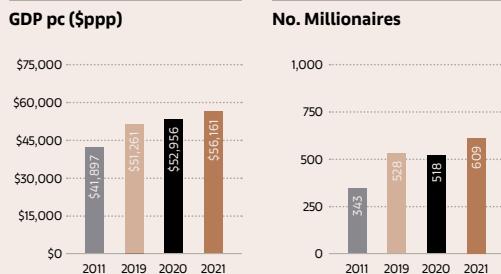
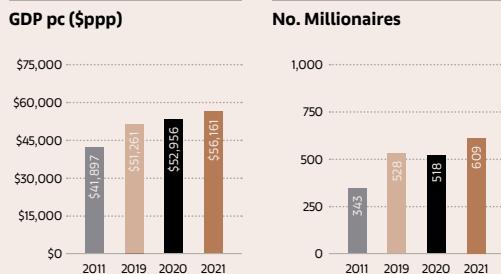
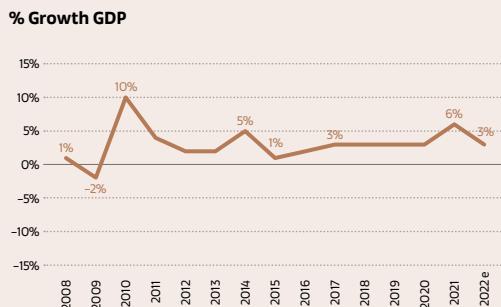
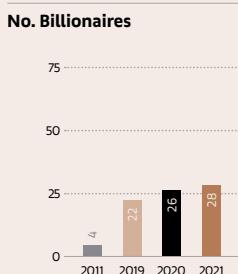
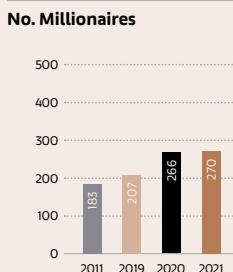
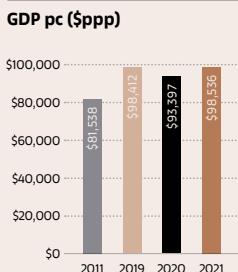
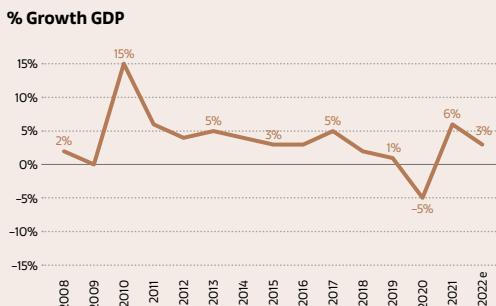


Figure 4.9 | HNW Collector Survey: Market Summaries (continued)

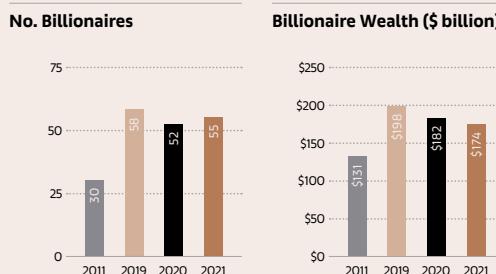
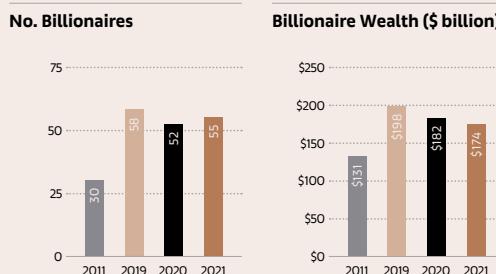
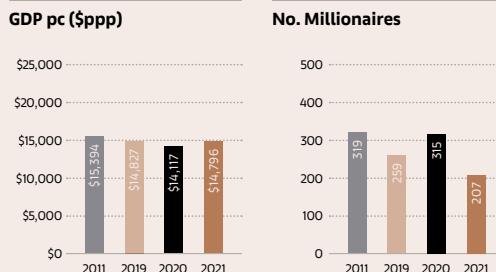
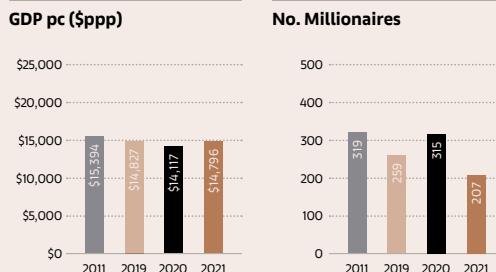
IX. Singapore

- Share of global millionaires: 0.5%
- Share of global billionaires: 1%
- Share of billionaire wealth: 1%



X. Brazil

- Share of global millionaires: 0.4%
- Share of global billionaires: 2%
- Share of billionaire wealth: 1%



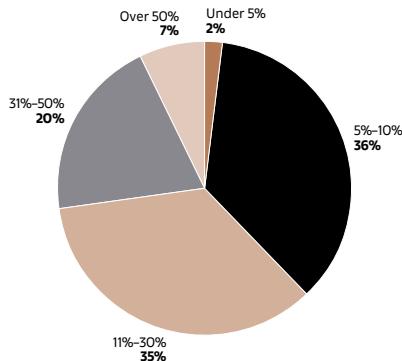
4.5 | Description of the HNW Collector Sample

The HNW collector survey covered 10 regional markets in 2021, and, as in previous years, for inclusion in the research, respondents were screened according to their wealth and activity in the art market over two years. Respondents were required to be HNW individuals, defined here as having a current net worth, excluding real estate and private business assets, in excess of \$1 million. To ensure they were currently active in the art market, they were required to have purchased fine or decorative art in both 2020 and 2021. In order to make sure that they were also active enough in the market to be able to offer insights on trends in spending and other activities, they were excluded from the survey if they had not spent more than \$10,000 on art and collectibles in each of the years 2020 and 2021. This screening process continued until there was a minimum of 400 suitably qualified responses for the US, 300 from Mainland China, and 200 from each of the other markets.

As in previous years, although the questionnaire was distributed across a broad range of age groups, the breakdown of qualified respondents was dominated by millennials (52%) and Gen X collectors (35%), reflecting the most currently active collecting segments in the market.⁴⁸ Boomer and Gen Z segments accounted for just 12% of the total respondents, with many screened out during sampling. The results of the survey therefore reflect findings from younger collectors that dominate the sample, although comparisons are given across generations where possible.⁴⁹ The average age across all countries was 39 years, ranging from 35 in Brazil to 44 in the US.

The overall gender breakdown of the aggregate sample was 39% female, 61% male, with just less than 0.5% identifying as non-binary.

Figure 4.10 | HNW Collectors' Allocation to Art in Overall Portfolio of Wealth in 2021



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⁴⁸ For the purposes of this survey, Gen Z are defined as those collectors who are under 24 in 2021, millennials are 24 to 38 years old, Gen X are 39 to 54 years, Boomers are 55 to 73 years, and Silent are 74 years and over.

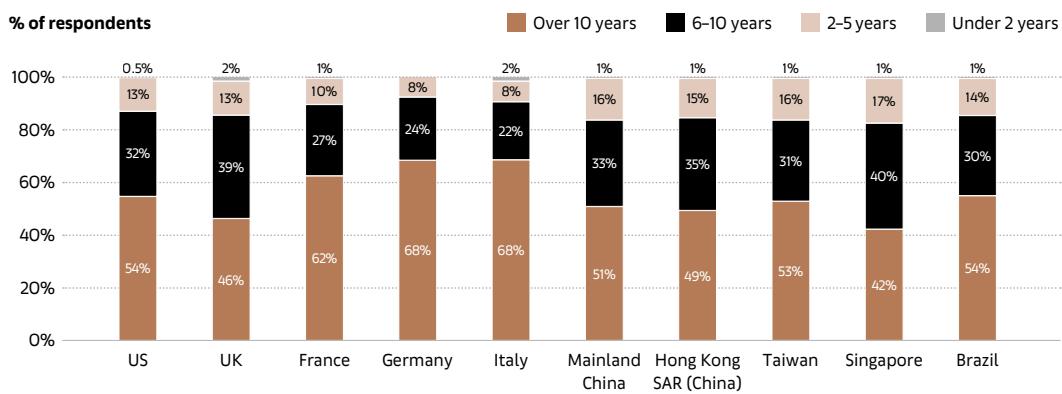
⁴⁹ A more detailed description of the sample is given in the Appendix.

All respondents had personal wealth in excess of \$1 million (excluding real estate and private business assets), with a majority (58%) in excess of \$10 million, including 15% in the ultra-high net worth (UHNW) category, defined here as wealth of over \$50 million. The highest share of UHNW adults was in Germany (31%) and Mainland China (30%), consistent with previous years' samples.

The HNW collectors in this sample had a relatively high proportion of their overall portfolios of wealth invested in art, with 64% reporting an allocation of over 10% (with wealth measured in this instance including real estate and private business assets). A smaller segment of collectors (27%) reported allocating over 30% of their wealth portfolios to art (stable year-on-year), with the highest shares in the US, Germany, and Mainland China, while Hong Kong SAR (China) and Singapore were considerably lower than the average.

Gen Z collectors had the highest average share of wealth dedicated to art, with over a third having an allocation of more than 30%, higher than both their millennial (27%) and Gen X (24%) peers. This is likely due in part to their age and lifecycle stage and the build-up of assets over time, but it shows the significant position that art holds at an early stage in the wealth portfolios of some young collectors. It also underlines the potential importance of this segment as they build their collections over time.

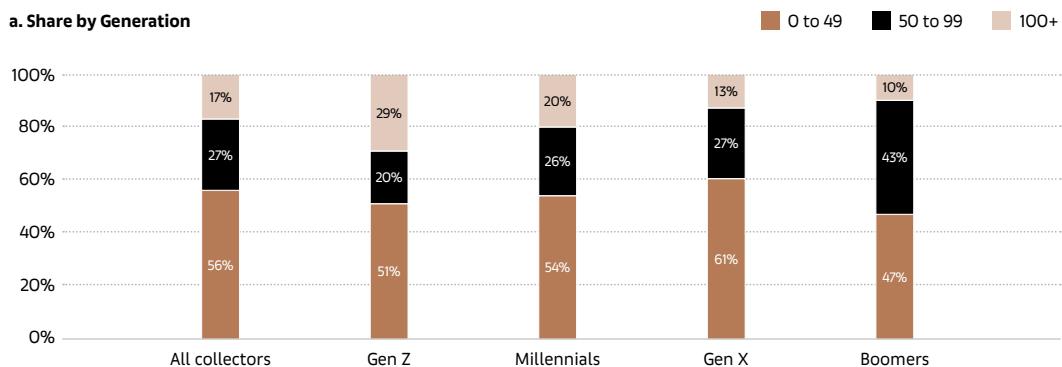
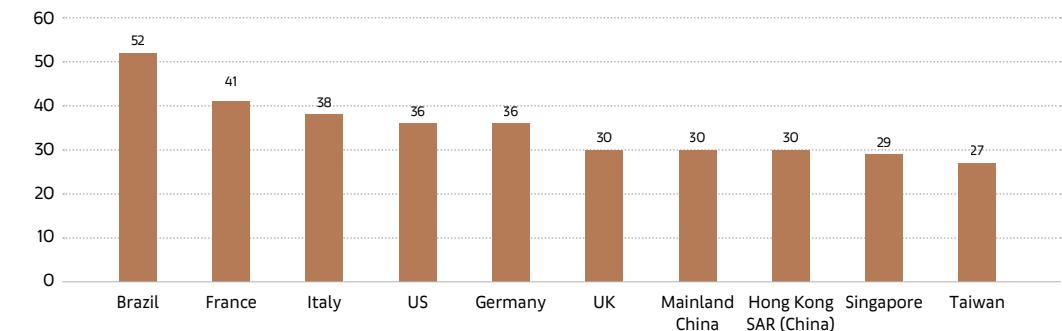
Gen Z collectors had the highest average share of wealth dedicated to art, with over a third having an allocation of more than 30%

Figure 4.11 | Length of Time Collecting by HNW Collector Location

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Despite the relatively low average age of the sample overall, most respondents had been collecting art for a number of years, with an average of 12 years across all markets. Just over half of the sample (55%) had been collecting for longer than 10 years, including 8% for over 20 years. A minority of 14% had been actively collecting for less than five years, and just 1% were new to the market in the last two years. While the length of time collecting rose in the expected way with age, even around half of millennial collectors reported having collected art for at least 10 years, showing that many take an interest from an early age. As in previous years, collectors tended to be more established in Europe and the US than in Asian markets. Those collecting longer tended to have built up substantially larger collections and spent more annually than newer collectors.



Figure 4.12 | Size of HNW Collector Collections (Number of Works) in 2021**a. Share by Generation****b. Number of Works By Collector Location**

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4.6 | The Content of Collections

The size of collections held by HNWIs in the sample varied widely, with a median of 34 works across all markets. The majority (56%) of collectors owned less than 50 works, however, 17% had 100 works or more. Boomers owned a larger number of works than their younger counterparts, averaging 40 versus 32 for Gen X collectors, 34 for millennials, and 36 for Gen Z. Size also expanded with wealth, and those individuals with wealth of above \$50 million owned 53 works on average versus just less than half that (26) for those with wealth of between \$1 million and \$5 million.

Brazilian collectors had the largest collections (52 works) and, consistent with previous surveys, collectors in Asia tended to have smaller collections, with a median of 30 works of art for collectors in Mainland China and Hong Kong SAR (China) and 27 for those in Taiwan.

HNW collectors tended to hold a balanced selection of living and deceased artists' works in their collections, with an average of 53% of works by living artists (up by 3% year-on-year from the 2020 survey) and 47% by deceased artists.⁵⁰ This was consistent across generations and wealth levels, as well as most regions, with the greatest share of living artists' works found in collections in Singapore and Germany. Newer collectors tended to have a greater share of living artists' works (57% for those new to the market in the last two years versus 49% for collectors of 20 years or more). However, there were few other significant differences by characteristics such as gender or age, indicating that collectors generally hold a balanced selection of artists' works in their collections.

Collectors were also asked to break down the works held in their collections according to the status of the artists and their career stage. While it is often reported that the wealthiest collectors focus only or mainly on top-tier or star artists, the evidence from this sample showed that in fact most hold a diversified range of artists in their collections, including a high proportion of new and emerging artists. Overall across all markets, collections were broken down into:⁵¹

- 23% of works by new artists, that is artists who were new to the commercial market and not yet represented by a gallery;
- 22% by emerging artists or artists developing in their careers that have been showing in galleries or museums for less than 10 years;
- 25% by mid-career artists who had been showing for more than 10 years in galleries or museums, and with an established name or reputation, but not yet considered top-tier; and
- 30% by established or top-tier artists that have a strong and well-established secondary market in the auction and/or gallery sector, and that were currently selling regularly for prices in excess of \$100,000.

⁵⁰ This share excludes works where collectors did not know or were unsure of the status of the artist, which averaged 19% of the total across all markets.

⁵¹ This excludes a small share of works (9%) where collectors were unsure of the career status of the artist.

Gen X collectors showed the highest preferences for established artists (32% of the works in their collections), but there were few other substantial differences between generations. Although it might have been expected that wealthier collectors held more established artists, this was also not the case, and allocations were similar across wealth levels. Newer collectors were more likely to have newer artists' works (39%), but even this segment of collectors held a diversified share, with 24% of established artists' works on average.

Figure 4.13b shows some small regional differences, notably a higher share of established artists collected by HNWIs in Mainland China and Italy. German collectors showed the highest level of collecting in the mid-tier artists' segment (29%). Although this segment of artists can sometimes be less sought after, being neither the newest nor the most famous, they form a critical part of the market's infrastructure and an important step between emerging and higher tiers. The higher level of collecting in Germany is likely tied to the larger segment of local galleries operating in this tier in key cities such as Berlin. However, although the local access may have an influence, it is not the only determining factor of collection content, and collectors also purchase from overseas galleries and a variety of other channels (discussed below). In cities such as Beijing and Shanghai, only a minority of galleries focus on the very top-tier artists, with the greatest emphasis tending to be on mid-tier artists. The focus on top-tier artists in Chinese HNWI's collections is therefore likely to come from purchasing elsewhere (including at auction in Mainland China). In the major cities in the US, such as New York and Los Angeles, on the other hand, a much higher share of galleries focused on the top-tier artists, however, US collectors showed some of the lowest allocations in their collections to the most established artists and had the highest share overall (53%) of new and emerging artists' works. These findings indicate that while the local market infrastructure may undoubtedly influence collectors, it does not necessarily define or mirror the structure of their collections.

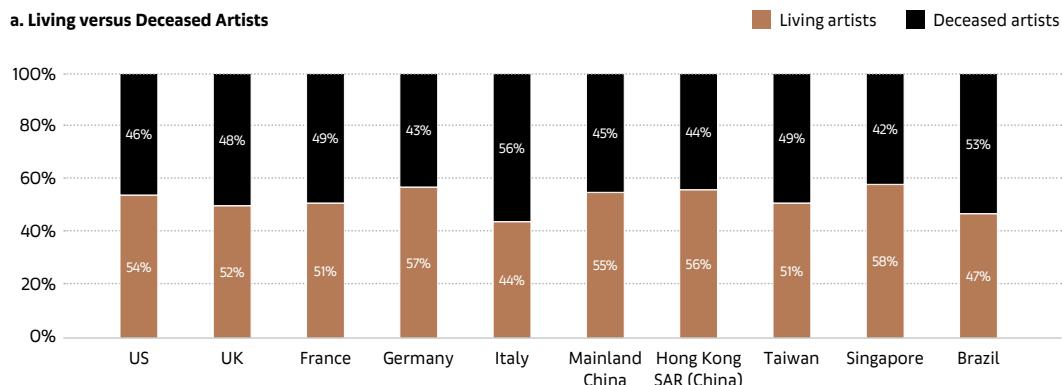
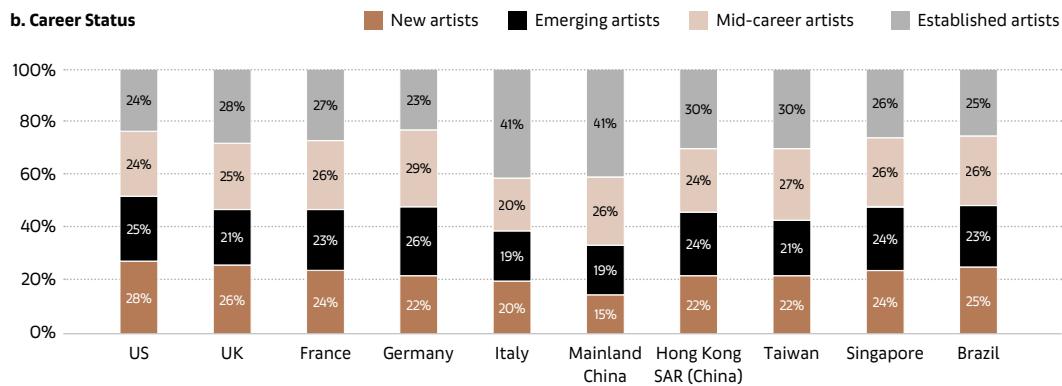
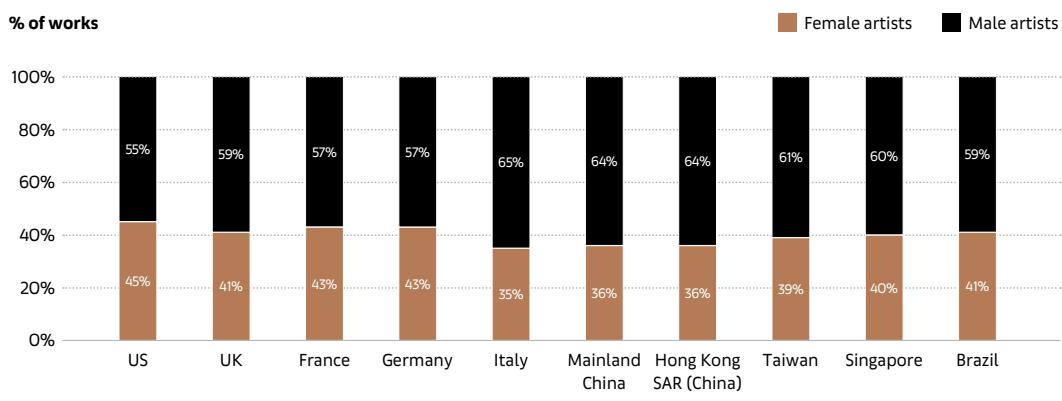
Figure 4.13 | Collection Content: Share of Works by Artist Status in 2021**a. Living versus Deceased Artists****b. Career Status**

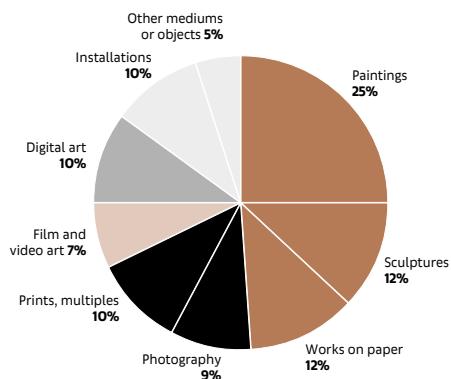
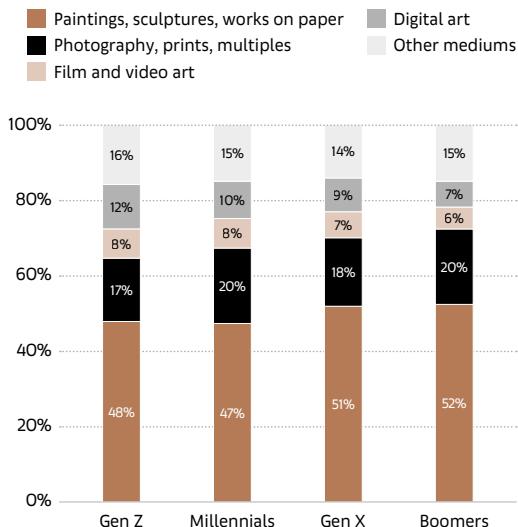
Figure 4.14 | Collection Content: Share of Male versus Female Artists' Works in 2021

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Collections of HNWIs were less diversified when it came to the gender of artists, and across all regions and demographics tended to be dominated by the work of male artists (60% on average).⁵² As noted in previous reports, this does not always imply that collectors are biased in their selection of works, and most anecdotally reported not being influenced by either the race or gender of the artist when considering which works to purchase. However, the extent that female artists' works are less available or represented less in the auction and gallery sectors will clearly have an important influence on the composition of collections. While there is still a lack of parity, there are indications that this imbalance may be slowly improving. At 40%, the share of female artists' works has increased over time: from 39% in 2020, 37% in 2019, and 33% in 2018.

Although female artists' works were a minority in collections across all markets, there were some regional differences, and the portion was highest in some of the larger and more established markets such as the US, France, and Germany, where works by female artists may be more available, and lowest in Italy (35%) as well as Mainland China and Hong Kong SAR (China) (36% each).

⁵² The share of works of male versus female artists cited here compares only those works where gender could be assigned to either. On aggregate in the sample, collectors could not assign a gender to 25% of the works in their collections. These included 12% where it was unknown and 13% where it was identified as non-binary or could not be classified into male or female, for example in the case of artist duos or collectives.

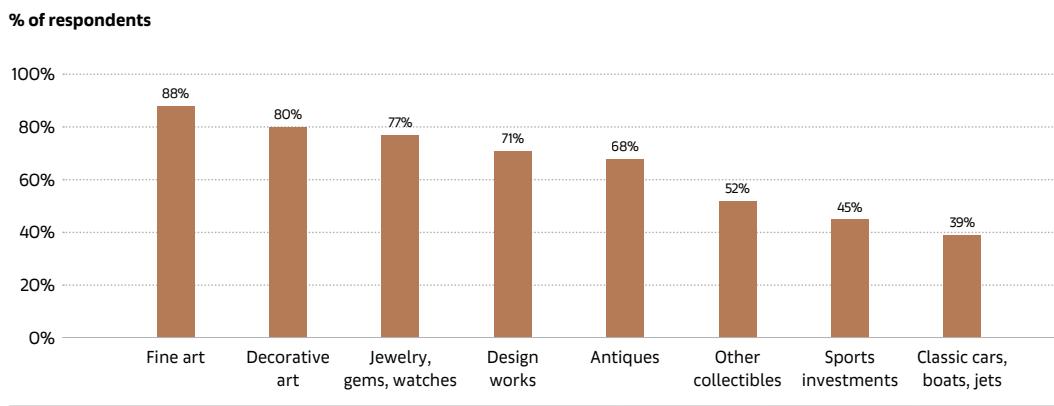
Figure 4.15 | Collection Content: Share of Works by Medium in 2021**a. All HNW Collectors****b. HNW Collectors by Generation**

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HNW collectors owned works covering a range of different mediums. Just under half (47%) of the works in collections in 2021 were unique works in traditional fine art mediums (paintings, sculptures, and works on paper), with paintings being the largest area of collecting regardless of the collectors' age or location. Prints, editions, and photography made up a further 19%. Previously a more niche area of collecting, digital art came into much greater mainstream focus in 2021, particularly with the growth of sales via NFT platforms and a number of high-profile sales. Digital artworks accounted for 10% of HNW collections on average, with a slightly higher share for Gen Z collectors (12%) versus Boomers (7%). In total, 17% of the works in the collections were digital, film, and video art, showing the significance of these mediums in 2021. The more widespread interest in NFTs may lead to an increase in these shares in future, and most HNW collectors in the sample had already purchased NFTs associated with artworks in 2021 (see Section 4.8).



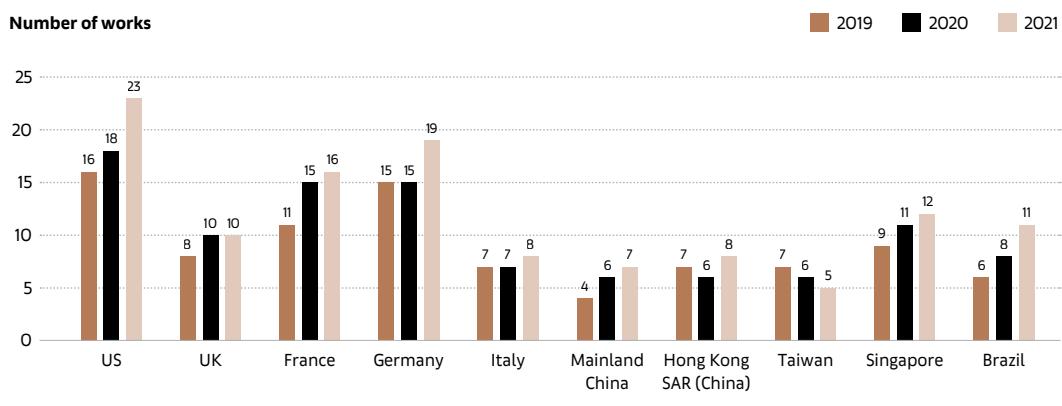
Figure 4.16 | Share of HNW Collectors Having Purchased Art, Collectibles, and Luxury Assets in 2020 and 2021



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4.7 | Expenditure on Art in 2021

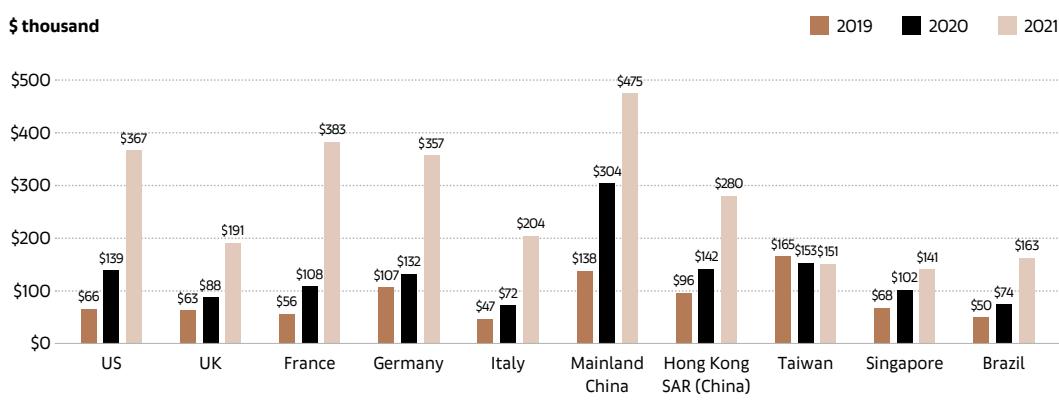
Despite the challenges posed by the pandemic, HNW collectors had purchased across a range of different markets in the last two years. Due to the screening criteria, all respondents had bought either fine art (88%), decorative art (80%), or antiques (68%). Other popular collectible markets included jewelry, gems, and watches (77%), and design works (71%). Fine art was the most popular across all generations of collectors, and the majority of collectors of all ages showed evidence of cross-collecting over these five segments. Fine art was also the most popular purchase across different regions, with the exception of Germany and Taiwan, where decorative art ranked higher (with fine art in second place). Figure 4.16 shows the pattern of cross-collecting by HNW collectors, with the majority having purchased across several different categories, including antiques and design works (such as 20th and 21st century furniture) as well as other collectibles such as coins or memorabilia.

Figure 4.17 | Median Number of Purchases by HNW Collectors 2019–2021

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Although the global pandemic created some difficulties for collectors in accessing sales, as well as distracting their focus from their collecting activities, the survey indicated that most HNW collectors actively engaged in the art market in 2020 and 2021, underlining the importance of these collectors to ensuring that the market weathered the last two years better than might have been the case. Despite the challenges, many collectors were in fact even more active than in pre-pandemic years. On average, collectors purchased more works (including fine and decorative art and antiques) in 2021 than they did in 2020 (with an increase in the median number purchased from 10 to 12), and both years exceeded the number reported in 2019 (eight works). The volume of purchases increased in nearly all regions in 2021, with the greatest advances (and the largest average volumes) in the US and Germany. The two exceptions were the UK (where works purchased were stable on 2020 but still more than 2019), and Taiwan, where against the trend in rising volumes, collectors purchased less over both years than in 2019.

Across the 10 markets, millennials bought the highest number of works each year, peaking in 2021 with a median of 12 works, on par with Gen X collectors. All generations saw an increase in purchasing in 2021, and Boomers saw the largest increase over the period from six in 2019 and 2020 to nine in 2021, while Gen Z also rose from six in 2019 to 11 in 2021.

Figure 4.18 | Median Value of Expenditure by HNW Collectors 2019–2021

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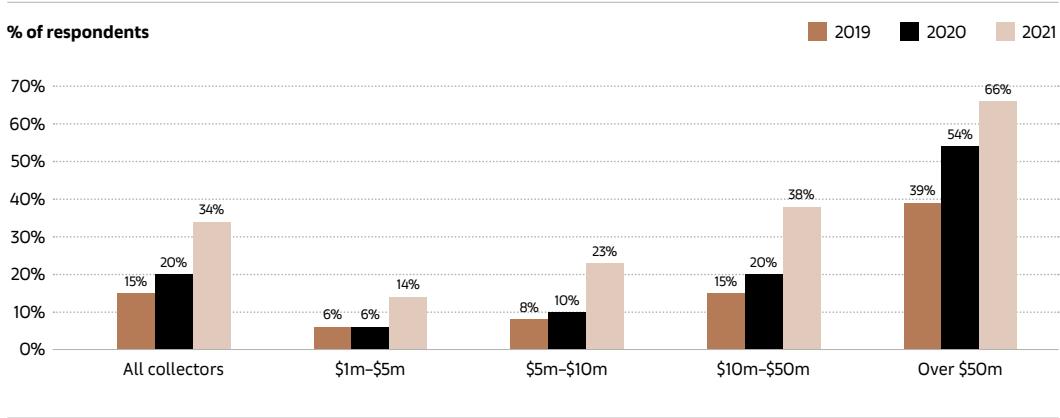
The value of spending by HNW collectors also increased substantially in 2021, and for the most part, exceeded both 2020 and 2019, again reinforcing their importance in maintaining the strength of the art market during the pandemic. The median expenditure on fine art, decorative art, and antiques by HNW collectors in this sample rose from \$72,000 in 2019 to \$126,000 in 2020, before more than doubling in 2021 to \$274,000.⁵³ Spending increased in nine of the 10 markets, with the exception of Taiwan, and the highest spending levels were in three of the largest art markets, with collectors from Mainland China the highest (\$475,000), followed by those in France and the US.

While millennials reported the highest median spending in the surveys in 2020, at \$251,000 in 2021, they were slightly lower than their Gen X peers (\$298,000), and notably Boomers, who, despite buying fewer works, reported the highest average value overall at \$346,000.⁵⁴ All generations saw spending at least double from 2020 to 2021, and all between three and five times the level of 2019.

⁵³ The average spending per collector in 2021 was \$2.7 million across these three categories. The average showed a less dramatic but similarly positive increase of 25% from \$1.2 million in 2019, to \$1.5 million in 2020 and a further increase of 74% in 2021.

⁵⁴ As outlined in the introduction to the survey, the figures reported for Boomers rely on data from just 6% of the total responses, or around 130 people, which is significantly less than some of the previous years' surveys. 63% of the Boomers were also found in the US and Mainland China, two of the largest art markets, and this might have influenced higher spending patterns in these results. Due to the small sample size, the findings may not be applicable to all HNW Boomer collectors but are nonetheless still notable and indicative of a very strong advance in spending among this small segment.

Figure 4.19 | Share of HNW Collectors Spending over \$1 million on Art and Antiques by Wealth Level 2019–2021



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The screening criteria for the survey stipulated that all respondents had spent over \$10,000 on art and antiques in each of the last two years. However, in practice, most had spent over \$100,000 in 2021 alone. While around half of the collectors surveyed reported spending over \$100,000 in 2019, this share rose to 62% in 2020 and again in 2021 to 74%. Despite the pandemic, spending at the level of over \$1 million per year also expanded. In 2021, across all generations, one third or more of HNW collectors had spent over \$1 million on art and antiques, with an average share of 34%, up from 20% in 2020 and more than double the level in 2019. Mainland China had the highest amount of spending at this level (44%), and there were also high levels in Germany (38%), France, and the US (both 36%). Singapore had the lowest share at 21%.

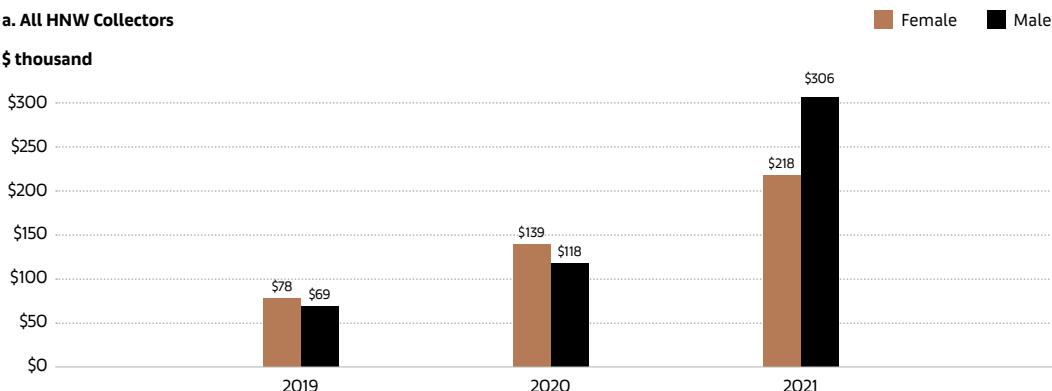
Personal wealth and the length of time collecting were the most important drivers of high expenditure. About half (51%) of those collecting for more than 20 years had spent over \$1 million in 2021, versus one quarter of those collecting for between two and 10 years. However, some of the newest collectors also spent large sums, with 41% of those collecting for less than two years spending over \$1 million in 2021. This segment of new collectors had a higher median spend (\$400,000) than the collectors who had been in the market for up to 20 years, although by far the highest average was for the most established collectors of more than 20 years (\$900,000). These results are in

keeping with some of the evidence from the auction and dealer sectors during the year, where businesses noted that factors including their digital outreach, NFTs, and increasing wealth in certain regions and industries had attracted new young and wealthy collectors to the market, including those spending at high price levels.

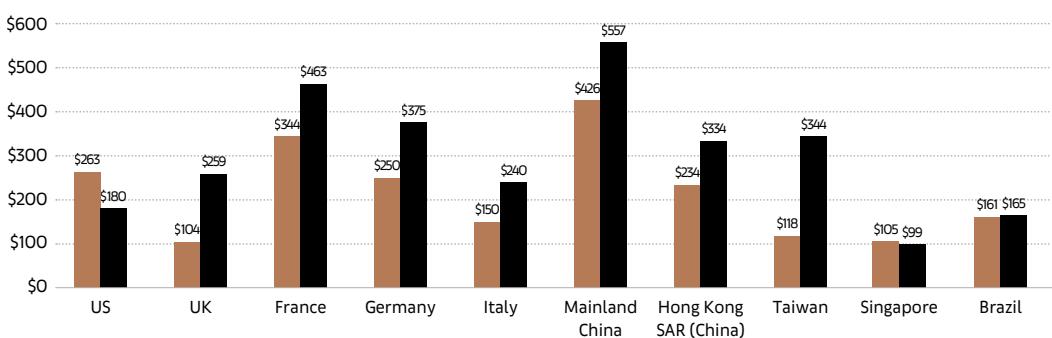
The wealthiest UHNW collectors (with personal wealth of over \$50 million) had a markedly higher level of spending, with a median of just under \$4 million versus \$112,000 for those in the segment with wealth of up to \$5 million. 66% of UHNW collectors had spent over \$1 million on art in 2021, up from 39% in 2019, and against just 14% of those collectors with less than \$5 million in personal wealth. Regardless of the age or whereabouts, the scale of wealth continues to be the major driver of spending.

While female collectors saw a greater advance in spending in 2020 and reached a higher median (\$139,000) than men (\$118,000), this trend was reversed in 2021. Overall, male collectors reported an increase of close to 160% (to \$306,000) while female collectors saw a very significant, but more modest rise year-on-year of 78% (to \$218,000). Expenditure by male collectors was higher in most markets, with the exception of Singapore and notably the US, where female collectors spent over 45% more than men, and in Brazil where spending was more on par between men and women. Some of the biggest margins were in the UK and Taiwan, where male collectors' spending was more than twice as high as women – a reversal of the trends found in the research in 2020. There were very few substantial differences in terms of the mediums purchased or channels used that may have driven this change, apart from a slightly higher share of spending at art fairs by men versus directly from a dealer by women.

HNW collectors purchased works of art across a range of prices in 2021, with just over half (54%) most frequently transacting at levels greater than \$100,000, both on par with surveys in 2020. A minority of 12% transacted most often at prices in excess of \$1 million. Although this was a slightly lower share in the \$1 million-plus spending range than in 2020 (15%), it still exceeds that reported in 2019 (10%). There was also a higher proportion of collectors typically spending in the very highest range of \$10 million-plus (4% in 2021 versus 2% in 2020), showing that for a small group of collectors, the challenges of the pandemic did not deter major purchases, and boosts in HNW wealth over the last year contributed to more spending at the high end, as evidenced also in the dealer and auction sectors.

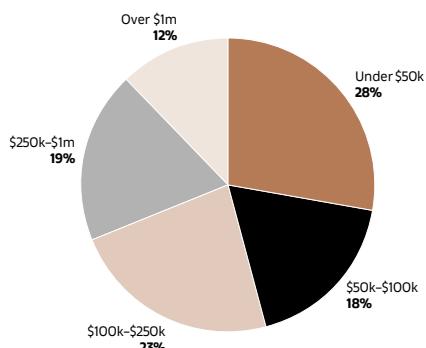
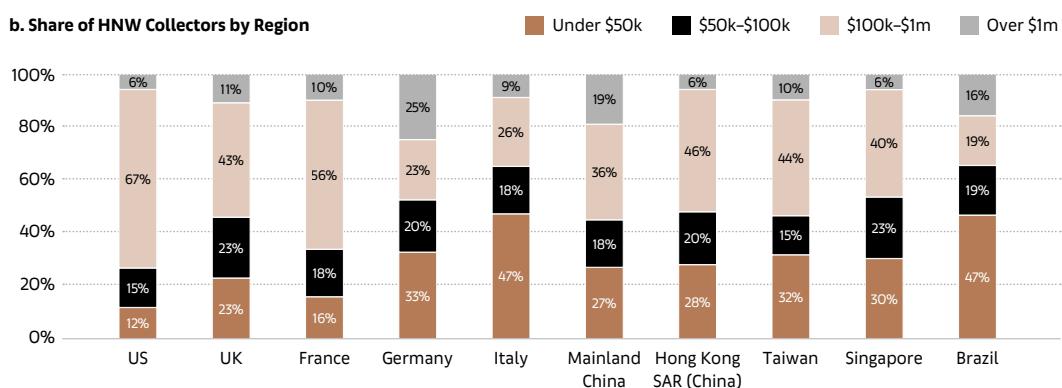
Figure 4.20 | Median Expenditure by Male versus Female HNW Collectors 2019–2021**a. All HNW Collectors****b. HNW Collectors By Region**

\$ thousand



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The price points at which collectors transacted at rose strongly and in direct proportion to both their wealth and the length of time they had been collecting. Around half (49%) of those with wealth in excess of \$50 million most regularly bought works for over \$1 million in 2021, versus only 1% in the \$1 million to \$5 million wealth range (where a majority transacted at prices of between \$10,000 and \$250,000). There were also regional differences, with a higher-than-average share of \$1 million-plus spenders in Germany (25%), Mainland China (19%), and Brazil (16%), however, the US had the highest share in the \$100,000-plus segment (at 73%).

Figure 4.21 | Most Common Price Range for Purchasing Works of Art in 2021**a. Share of All HNW Collectors****b. Share of HNW Collectors by Region**

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While younger collectors had stronger aggregate spending in some categories, Boomers generally purchased art at the highest prices. The median price for transacting in 2021 for Boomer collectors was \$105,000, which was higher than Gen X (\$96,000), millennials (\$91,000), and Gen Z collectors (\$61,000). Boomers were also on par with millennial collectors in terms of how many typically bought art at prices of over \$1 million (13%), and higher than the share of Gen X collectors (9%).

While the proportion of millennials in this highest-spending segment fell by 6% from 2020, both Gen X and Boomers increased, and again, overall there were no indications that the pandemic had affected the price levels HNW collectors were spending at in any negative, systematic way, and on the contrary, spending at the highest prices increased in 2021.

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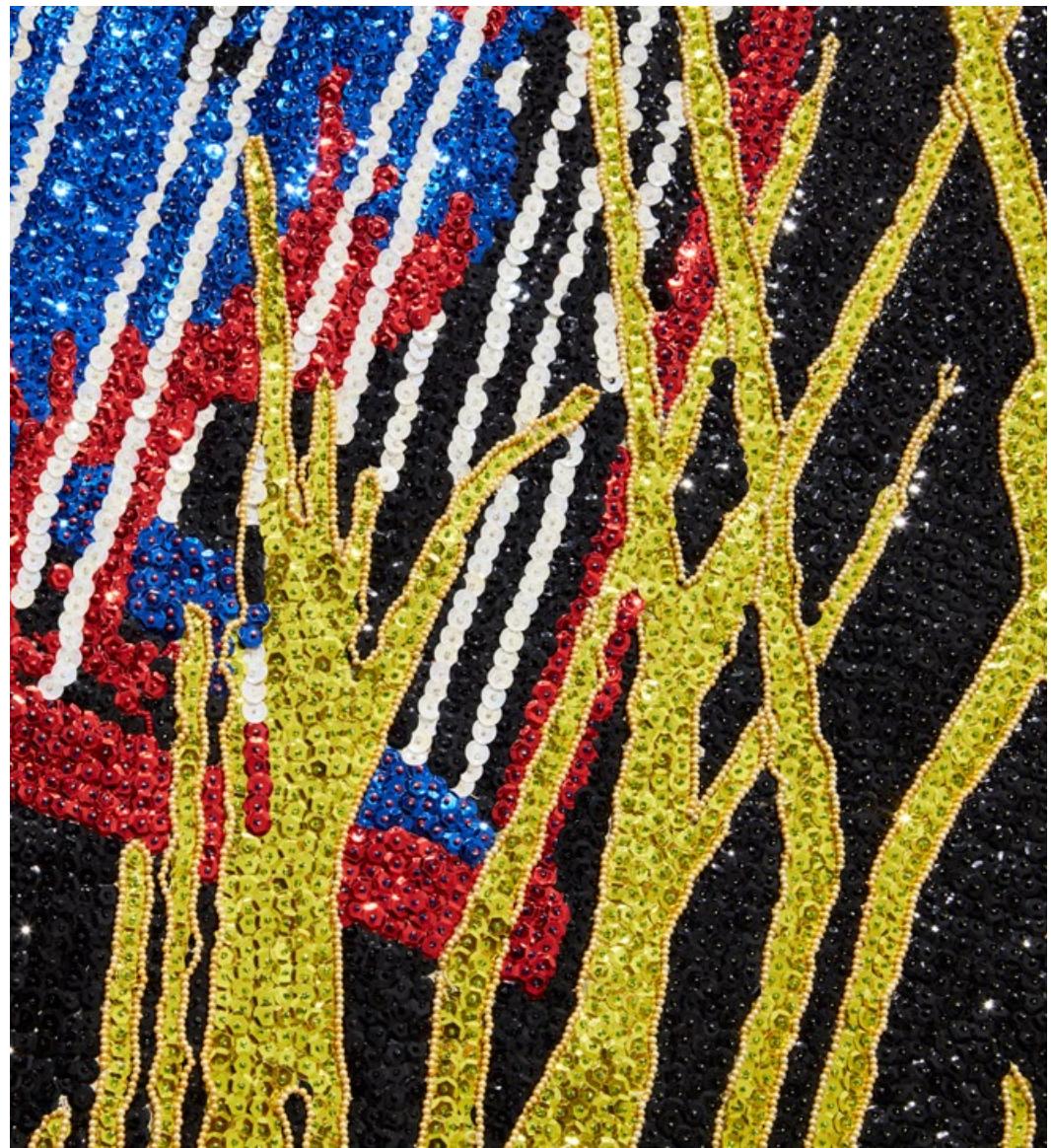
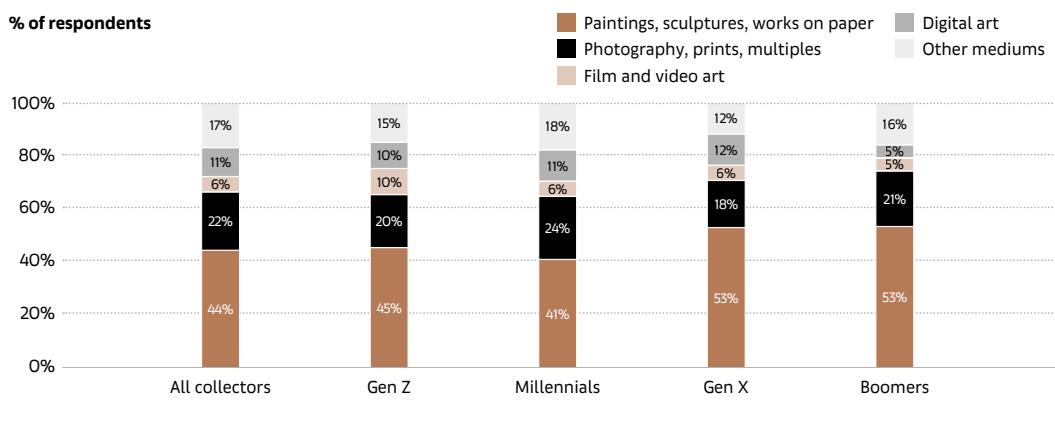


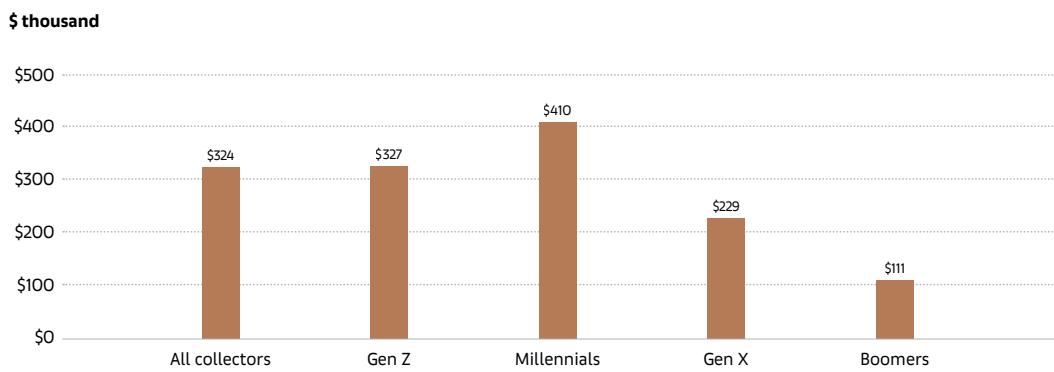
Figure 4.22 | Share of HNW Collector Expenditure on Art by Medium in 2021

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4.8 | Expenditure on Digital Art and NFTs

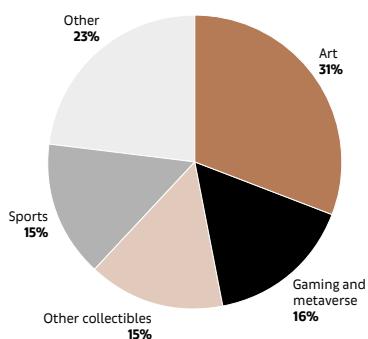
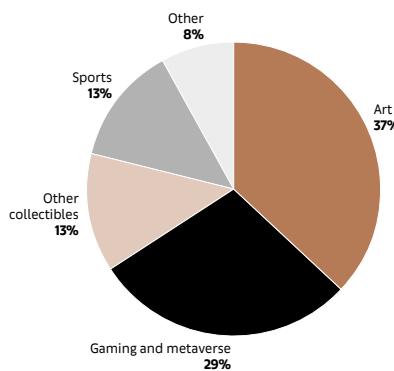
Looking further into what collectors bought in 2021, the highest share of spending by value was on works in traditional mediums. Based on the aggregated sum of their median expenditure in each category, paintings, sculptures, and works on paper accounted for 44% of HNW collector spending, while the share of digital art was 11%.

Paintings, sculptures, and works on paper accounted for 44% of HNW collector spending, while the share of digital art was 11%

Figure 4.23 | HNW Collector Average Expenditure on Digital Art in 2021

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Looking at average expenditures, and focusing only on those who had purchased digital art in 2021, younger collectors spent more than their older peers, with millennials reporting the highest average (\$410,000). These averages were influenced by the very high spenders and the median expenditure was substantially lower (at only \$6,000) and more on par between Gen Z, millennial, and Gen X collectors, but still above Boomers. It is notable that based on averages, younger collectors also spent more than Boomers across all categories of fine art, while again the median expenditure was more on par across generations. This shows that a small number of young collectors have been spending significant amounts on digital art: the share of Gen Z and millennial collectors overall who had spent over \$1 million in this medium in 2021 was 5% and 4% respectively, versus 1% for Gen X and Boomers.

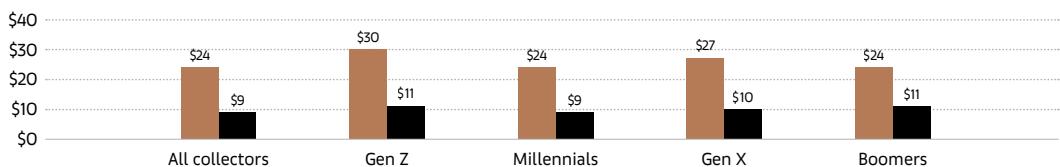
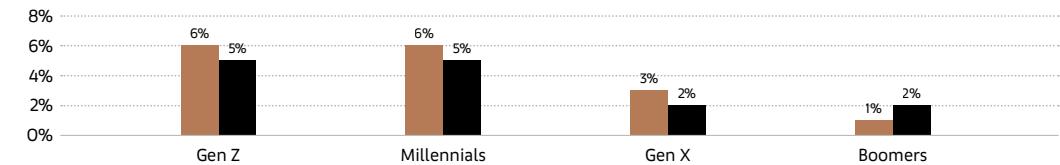
Figure 4.24 | Share of Expenditure by HNW Collectors Who Bought NFTs in 2021**a. Total Number of NFTs****b. Total Value of NFTs**

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Collectors were also asked about their interest in and expenditure on NFTs in 2021, revealing a very high level of engagement in all regions. Across all markets, a majority (76%) of collectors had purchased an NFT of some kind in 2021 (not necessarily related to art), and the share was as high as 89% in the UK and 81% in the US and Taiwan, with younger and newer collectors in all regions having the highest take-up. While collectors had purchased across a range of different NFT segments, most (74%) had purchased art NFTs, and 72% had bought at least one NFT based on a digital artwork.

For those who had purchased NFTs, the median number summed over all categories was 13, including four related to art. The median expenditure across all NFTs was \$24,000, with 37% of that (or \$9,000) on those related to art.⁵⁵

⁵⁵ This median expenditure is the sum of the expenditure reported for NFTs related to digital art and art in other mediums. Although the median expenditure was relatively low, some HNW collectors spent much more, and the average expenditure for those who were active in this area was significantly higher at \$2.1 million overall, including \$668,000 on those related to art, substantially higher than the median due to a small share of very high spending collectors.

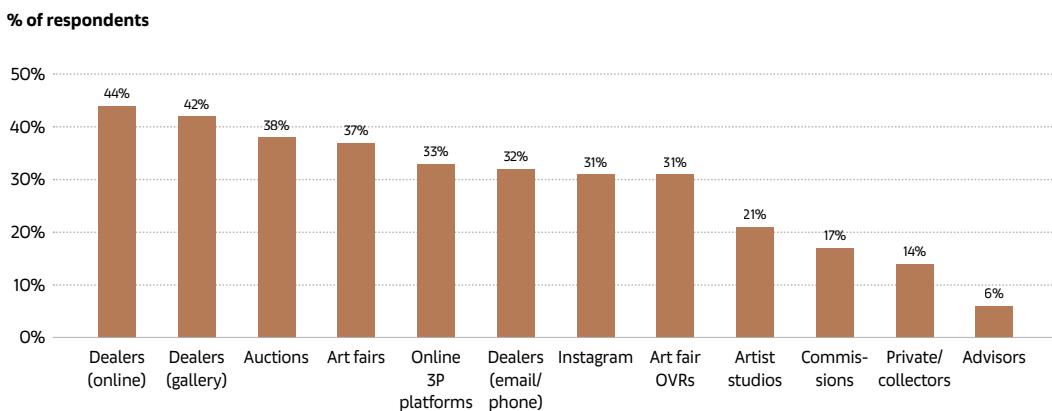
Figure 4.25 | HNW Collector Expenditure on NFTs by Generation in 2021**a. Median Expenditure****\$ thousand****b. Share of HNW Collectors Spending Over \$1 million on NFTs****% of respondents**

© Arts Economics (2022)

For those collectors who had purchased NFTs, the median spending on art-related NFTs did not vary that significantly between generations, ranging from \$9,000 for millennial collectors to \$11,000 for Gen Z and Boomers. However, these median values mask the fact that a small number of younger collectors spent at very high levels, with annual average spending for Gen Z and millennials in the sample on art-related NFTs both at just over \$800,000 in 2021 versus less than \$200,000 for Boomer collectors. A small share of 6% of both Gen Z and millennial collectors who had purchased NFTs spent over \$1 million on NFTs related to digital artworks, versus 3% of Gen X and 1% of Boomers.

Despite the rise of sales via NFT platforms, in this sample of HNW collectors, most had still stuck to sourcing NFTs from galleries and auction houses and just 8% used an NFT platform. Gen Z collectors showed the highest use of NFT platforms, although this was still only 15%. This indicates that although these platforms are being widely used, it is clearly from a much wider group of interested buyers than these HNW collectors.



Figure 4.26 | Sales Channels used by HNW Collectors for Purchasing in 2021

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4.9 | Buying Channels for HNW Collectors in 2021

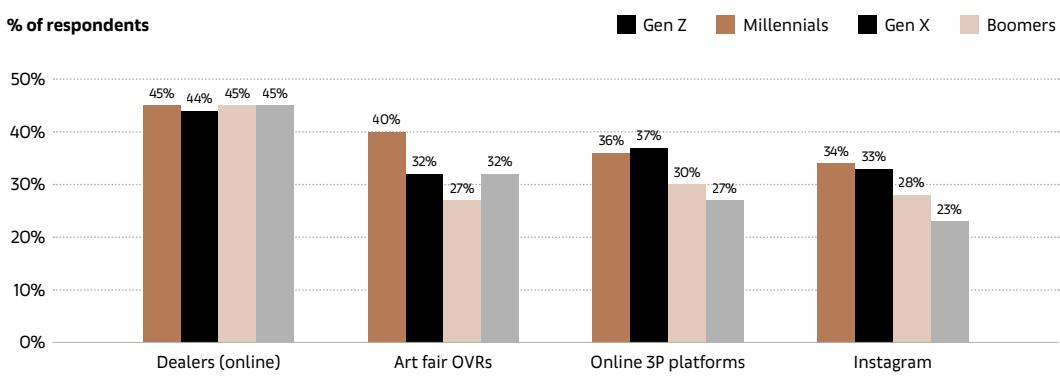
HNW collectors continued to purchase through a range of channels, both on- and offline in 2021. Dealers remained the most commonly used channel for purchasing art, as they have been in previous years' surveys, with 76% of the sample having purchased via a gallery or dealer in some format. While in previous years the most common method of accessing dealer sales was through their physical premises, the shift to online was clearly evident in 2021. Buying directly through a dealer's website or OVR was the most widely used (44% of respondents), while 42% reported accessing sales from galleries or other physical premises (down by 5% on 2020). This reflects both the fact that collectors have become more comfortable with buying online, as well as the successful shift of strategies and campaigns into the digital sphere by dealers, including improving the content and functionality of websites and platforms, which has enabled greater ease and better experiences of transacting online. A smaller share of collectors (32%) had made purchases by phone or through emailing the gallery.

Just over half of the sample (54%) had purchased at an art fair, including both live events and OVRs. Despite some continuing constraints on the full schedule of fairs in 2021, 37% reported that they had bought a work through an in-person event and 31% through an art fair OVR.

When disaggregated into their more specific access methods within channels (as in Figure 4.26), the third most widely used channel was buying works at auction, with (38%) of the sample having purchased art at auction in 2021. Auction channels were also more commonly used in certain regions, notably Brazil, where 71% of collectors had used this channel (ahead of those using galleries, with 52% having purchased at a gallery or physical premises), Taiwan (53%), and Mainland China (51%). Gen Z collectors reported the highest use of auctions, with 53% having bought at an auction in 2021, on par with buying at a gallery at their premises. This high proportion indicates that the auction sector may be a useful and popular channel for younger collectors to enter the market. Auctions were also more popular for Boomers, with a wider take-up of 49% versus Gen X or millennials.

A smaller but significant level of transacting also goes on outside galleries, auctions, and fairs, with some collectors choosing to interact directly with artists. In 2021, 21% of HNW collectors had bought an artwork directly from an artist's studio, and this was most popular in Taiwan (38%), Brazil, and Hong Kong SAR (China) (28% each). In these regions, collectors were also more likely to have directly commissioned works from artists (at 28%, 27%, and 21% respectively versus an average share over all markets of 17%). Buying works directly from artists was more prevalent for the most established collectors (34% for those collecting for more than 20 years), who may have built up more contacts over time, and they were also much more likely to commission works than newer collectors. Only 14% of collectors in this survey purchased from other collectors or directly from other private parties, which was around half the level reported in the surveys in 2020. (These private-to-private transactions also correlated with the length of time and experience in collecting.)

As in previous surveys, buying through an advisor was the least common channel, with an average across all markets of just 6% in 2021. Although they have less experience in the market, new collectors were much less likely to use advisors, with 15% of collectors that had been building their collections for more than 20 years using an advisor versus 5% or less for those collecting for up to 10 years. As noted in previous years, collectors also commonly used advisors for many aspects of transacting, from the search for new works, legal and regulatory advice, and appraisal and valuation, but still conducted the final sales transactions themselves, which means these small reported shares may significantly underestimate the use of advisors by HNW collectors.

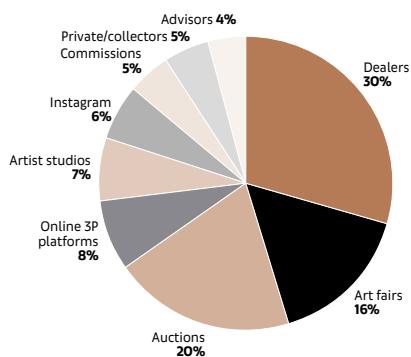
Figure 4.27 | Use of Online Channels for Purchasing by Generation in 2021

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In terms of online sales, apart from auction sales which were often accessed online by collectors in 2021, online sales directly from a gallery were the most popular, followed by online third-party (3P) platforms (33%), Instagram, and art fair OVRs (both at 31%). While online sales on Instagram were relatively low (where an artwork was found on Instagram and purchased directly or through a link on Instagram to an artist, gallery, or other seller), dealers and collectors continued to note that it remained the most important social media channel for finding and researching new artists and galleries. Similarly, although the majority of collectors did not make a purchase through an art fair OVR, many continued to acknowledge anecdotally that these platforms had become a regular and important staple in their personal research for new artists and galleries, as well as being the place they regularly looked to for sourcing works from artists they were already familiar with.

Although the use of online channels varied somewhat by region, with slightly higher use of Instagram and buying online from galleries in the major established markets such as the US and UK, one of the biggest variations in recent years has been the generational component of online sales. Younger collectors continued to show a wider use of art fair OVRs, third-party platforms, and Instagram, however, online gallery sales were used by all age groups, with Boomers just as likely to have bought through a dealer's website or OVR as Gen Z collectors. The high level and

Figure 4.28 | HNW Collectors' Average Share of Expenditure by Channel in 2021



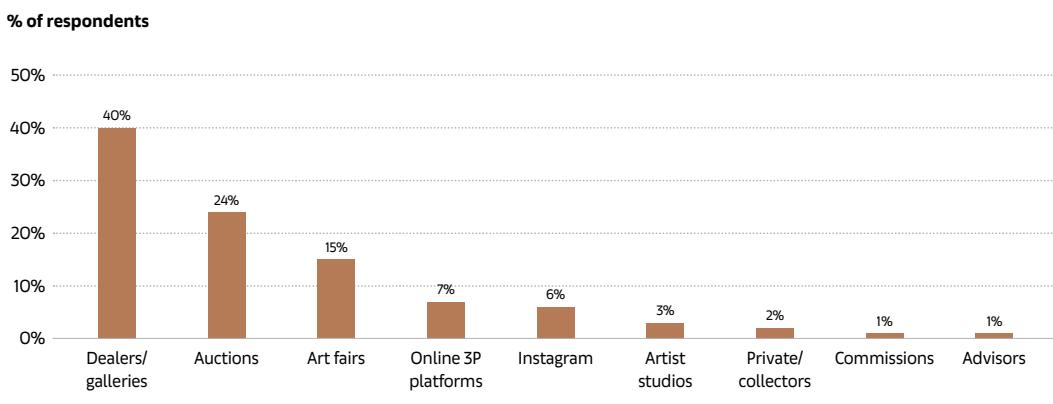
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wide spread of the take-up of this channel again indicates the broad acceptance of buying works online from galleries sight unseen and advances in the quantity and quality of supply online through this channel.

In terms of how much collectors spent in each of these channels, dealers and auction houses accounted for the majority of expenditure by value, with 46% of total spending at dealers, galleries, or art fairs and 20% through auctions. The spending at art fairs was split between live events (9%) and OVRs (7%), while sales at dealers were divided between their galleries (13%), their websites or OVRs (10%), and 7% by phone or email.⁵⁶

Dealers and auction houses accounted for the majority of expenditure by value, with 46% of total spending at dealers, galleries, or art fairs

⁵⁶ While Figure 4.28 shows a diversified range of spending, it is important to note that these average shares are influenced in some cases by a small number of collectors who used certain channels much more than average, and some were only used by a small portion of respondents. In the case of artist commissions, advisors, and private-to-private sales for example, although these accounted for a combined 14%, a majority of collectors did not spend anything at all through these channels. In each of these cases, the median share was zero.

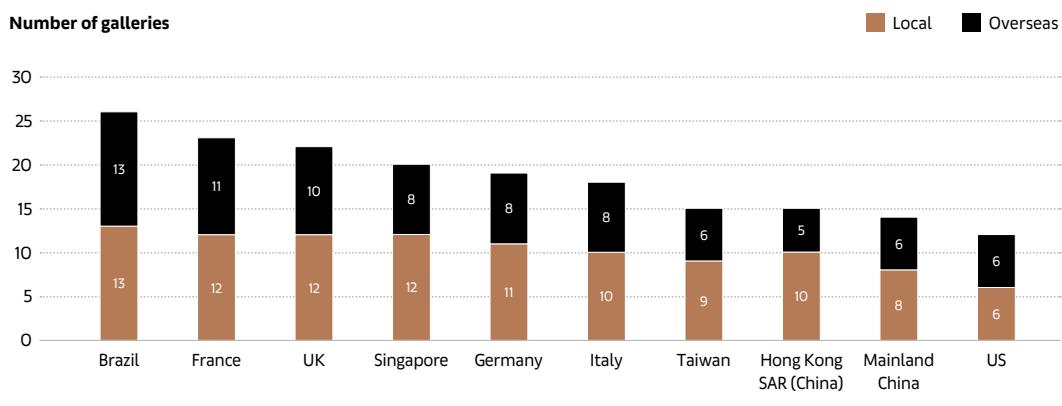
Figure 4.29 | HNW Collectors' First Preferences for Purchasing Art in 2021

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As in previous surveys of HNW collectors, apart from being the most widely used, dealers and galleries were also the first preference for most collectors when it came to buying art. 40% of respondents preferred to buy from a dealer, and a further 15% chose purchasing from dealers at art fairs. Of those respondents who preferred dealers, 45% opted for buying from them in person at their gallery or premises (down from 57% in 2020), with 35% preferring online and 20% by phone or email – both up by 6% on 2020 which again reveals some increased acceptance in transacting at a distance and buying sight unseen in 2021. Dealers were the most preferred way to purchase in nearly all regions, with the exception of Brazil and Germany where auctions led, and they were also the most common choice across all generations. The second most popular channel overall was auctions (24%).

Despite the evidence of greater acceptance and use of online sales and exhibitions, if it came to a choice between offline and online experiences, most collectors still preferred to view art for sale at a physical exhibition at a gallery or a fair. In this sample across all markets:

- 69% preferred live or in-person viewing at a gallery or fair, up by 3% on the surveys of 2020;
- 19% preferred OVRs or exhibitions (down by 3%); and
- 12% were indifferent to one over the other.

Figure 4.30 | Number of Galleries HNW Collectors Purchased from in 2021

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Including only those that had a preference either way, 78% of the HNW collectors surveyed preferred to view art for sale offline. There were some regional variations, with stronger preferences for online in Hong Kong SAR (China) (32%) and Singapore (29%), however, it was a minority in all regions, including as low as 9% in France. There was also little difference between generations, with collectors of all ages opting for live exhibitions ahead of online if given the choice. It was notable that a higher share of newer collectors preferred online: 38% for those who had been collecting for less than two years versus just 15% for collectors of more than 20 years, indicating that online exhibitions may be an easier and less intimidating entry point for new and less experienced collectors to first engage with the market.

Galleries remained a key channel for purchasing for collectors in 2021, and the number of galleries they had purchased from was relatively stable year-on-year for this sample, from 17 in 2020 to 18 in 2021. Collectors in Brazil dealt with the most galleries, averaging 26, while those in the US purchased from 12 overall, evenly split between local and overseas businesses. Although collectors in most regions were unchanged or reduced the number of galleries by one or two year-on-year, there was a notable increase for French and Brazilian collectors both adding three galleries on average, and in each case these were international galleries.

Across generations, the youngest Gen Z collectors were likely to work with more galleries than their older peers. The average number of galleries that they purchased from in 2021 was 25, up from 19 in 2020, while millennials, Gen X, and Boomer collectors had stable year-on-year averages of 19, 15, and 10 respectively.

HNW collectors dealt with a relatively balanced share of local and overseas galleries, with those they had purchased from in 2021 slightly in favor of local (10 of the 18 galleries). The highest portion of local galleries tended to be in the Asian markets, with the highest overall in Hong Kong SAR (China) (65% local galleries), and the lowest in the US and Brazil at around 50%. Again, despite the continuing difficulties travelling and restrictions still in place on some exhibitions and fairs, there was little evidence in 2021 of any major change to buying more locally. For the most part, collectors actually shifted toward buying slightly more from overseas galleries, with collectors from several regions adding one or two overseas galleries, while maintaining a stable number of local ones.

However, in terms of their preferences, looking ahead, 57% of collectors across all markets would prefer to buy from a local gallery in 2022 if given the choice. Of the remainder, preferences were evenly split between those preferring an overseas gallery (22%) and those that were indifferent (21%). Collectors in Mainland China were the most likely to choose local in 2022 (76%), while in Hong Kong SAR (China) the share was considerably lower (46%), with 31% indifferent between local and overseas galleries.

Across generations, the majority of collectors would opt to buy locally in 2022, with the exception of Gen Z collectors, where preferences were more balanced: local galleries were still the most common choice (42%) but 30% would opt for an overseas gallery and 27% were indifferent.

Figure 4.31 | Preferences of HNW Collectors for Local versus Overseas Galleries in 2022**a. Share of Collectors by Region**

Local Overseas Indifferent

Region	Local	Overseas	Indifferent
US	55%	25%	20%
UK	59%	28%	12%
France	65%	20%	17%
Germany	56%	26%	19%
Italy	51%	26%	22%
Mainland China	76%	6%	19%
Hong Kong SAR (China)	46%	24%	31%
Taiwan	59%	15%	27%
Singapore	53%	27%	19%
Brazil	44%	24%	33%

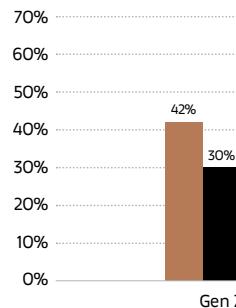
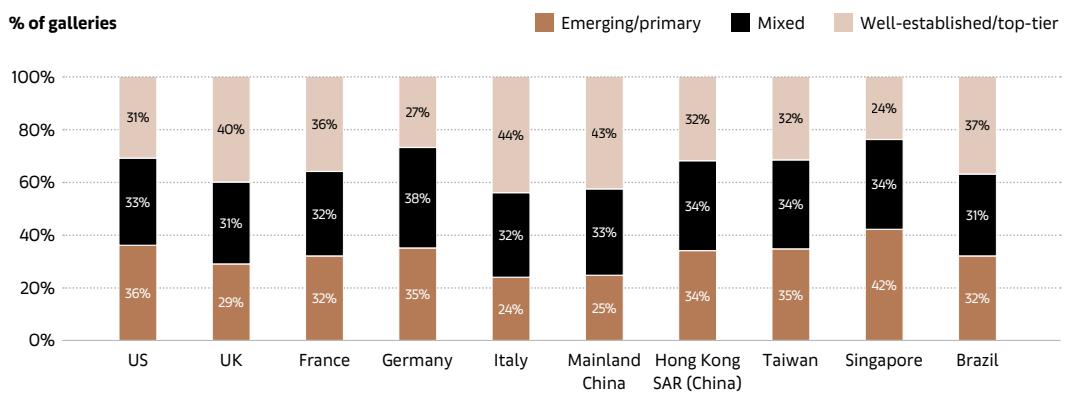
b. Share of Collectors by Generation

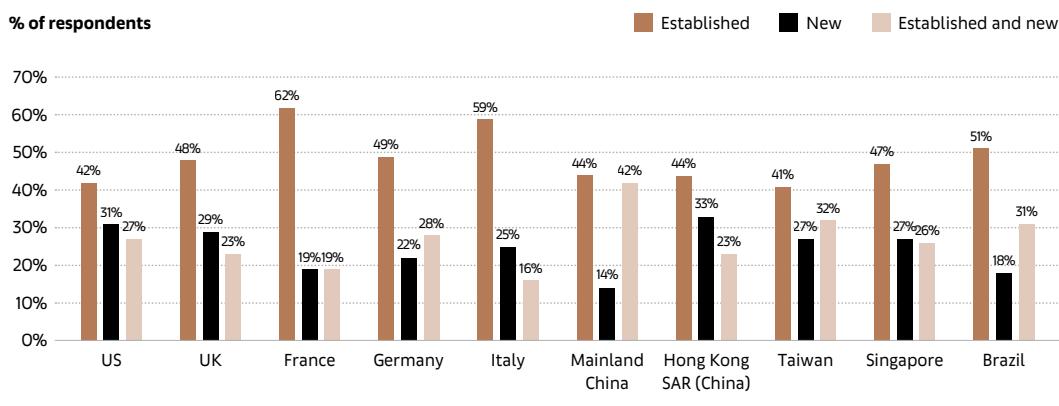
Figure 4.32 | Share of Galleries that HNW Collectors Purchased From in 2021 by Gallery Focus

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Aside from the number and proximity of the galleries they interacted with, collectors were also asked about the types of galleries they were working with and the artists they represented. Overall, collectors tended to work with a balanced range of galleries that represented artists at different levels. Across all markets, collectors reported that:

- 32% of the galleries they purchased from in 2021 were in the primary market and mostly working with emerging artists;
- 33% represented a mix of emerging artists alongside mid-career and top-tier artists; and
- 35% represented only well-established or commercially successful artists (mid-career or top-tier).

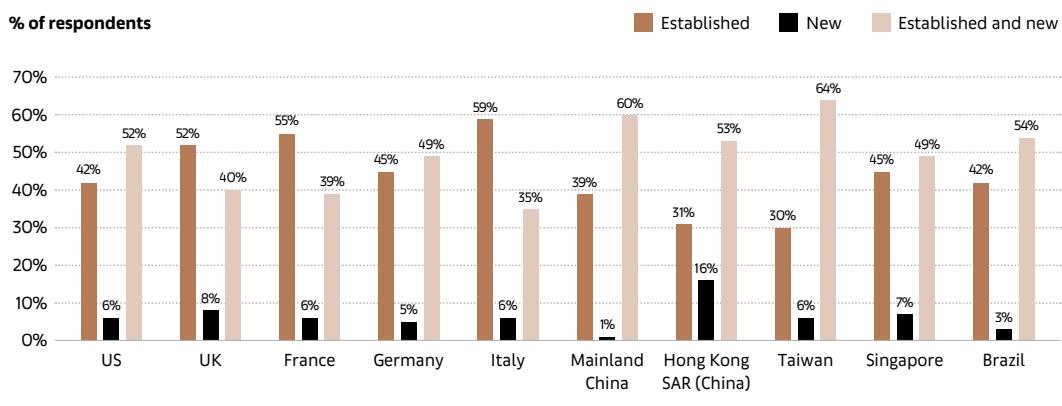
There was a greater emphasis on buying from the primary market and emerging-artist-focused galleries in some regions such as Singapore and the US, and a greater share buying from top-tier galleries in Italy and Mainland China. However, Figure 4.32 shows that in each region, collectors were buying from a mix of different galleries at different levels, and this diversity was also evident across generations, with a fairly balanced spread across all age groups.

Figure 4.33 | HNW Collector Focus Regarding Galleries during 2021

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In the enduring uncertainty of 2021, many collectors continued purchasing from galleries they already knew and had purchased from before, both to reduce risk and actively support galleries during the pandemic. Across all markets, 48% of collectors reported that they focused only on purchasing from galleries with which they had relationships (up by 2% on the surveys in 2020), while 27% said they were doing this alongside being open to working with new galleries. The share of collectors actively working only with new galleries was slightly higher at 25% in 2021 (versus 20% in 2020), but this was a minority in all markets, with the highest in Hong Kong SAR (China) and the US and the lowest in Mainland China (14%, also the lowest in 2020). Although Mainland China had the lowest share of those purchasing only from new galleries, collectors there were more likely to be working with a combination of new and established galleries in 2021 (42% of collectors). Collectors in European regions were most likely to be sticking to established galleries, with a majority doing so in France and Italy.

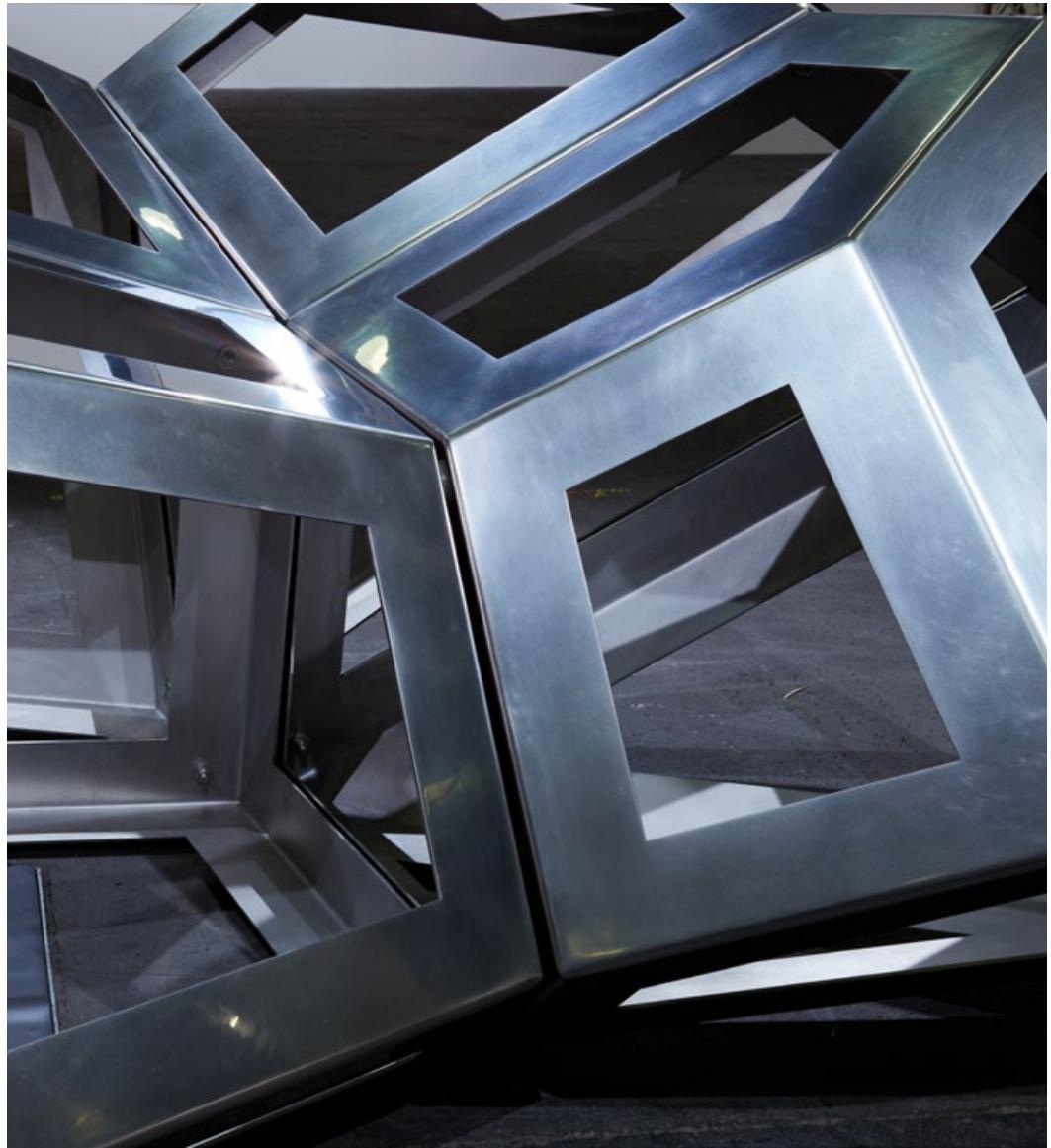
There were few differences between the generations, with a slightly higher proportion of Gen Z collectors more likely to have bought only from new galleries than other generations, while millennial and Gen X collectors were the most likely to have stuck with the galleries they knew.

Figure 4.34 | HNW Collector Focus Regarding Artists during 2021

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As in 2020, many collectors were also only buying the work of artists familiar to them or whose work they had bought before (44% in 2021). Half of the collectors surveyed had bought both artists they knew and had also discovered new ones, while just 6% had only purchased new artists that they had discovered in 2021, on par with the previous year's findings.

There were some regional variations, with the greatest share of collectors sticking to artists they knew in Italy (59%) and France (55%), and the lowest in Taiwan (30%), Hong Kong SAR (China) (31%), and Mainland China (39%). There were few significant differences in collecting interests between generations, with Gen X and millennial collectors the most likely to be sticking to the artists they knew. As in the 2020 survey, Boomers were more likely to have been purchasing new artists, with 9% of this cohort overall only seeking new discoveries, versus 6% of millennial and Gen X collectors.



4.10 | HNW Collector Perceptions and Motivations

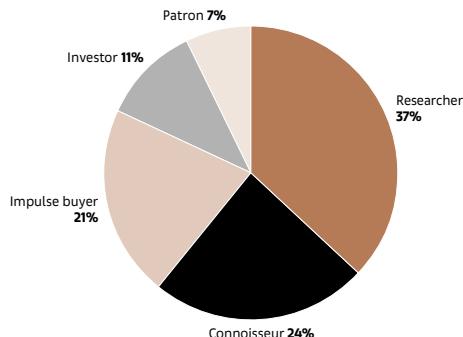
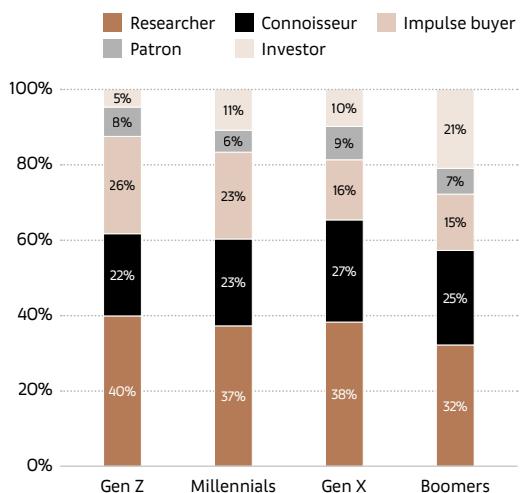
The tendency for some collectors towards sticking with artists and galleries that they already know is tied to the amount of risk they are willing to tolerate in their collecting activities. Some collectors have a more inherently cautious approach to collecting while others buy more on impulse, and the pandemic caused some to become more risk averse than usual.

Collectors were asked to describe how they viewed themselves with regard to their current collecting behaviors and motivations in 2021 across a range of five choices. Across all markets:

- 37% of the sample identified themselves as a 'researcher' when it came to collecting, engaging in significant amounts of research on artists before acquiring their work, including studying their background, gallery representation, and other aspects of their careers;
- 24% felt they were 'connoisseurs' that were dedicated to actively looking for the very best artworks by the best, top-tier artists;
- 21% '*bought on impulse*', making quick purchasing decisions, based mostly on the specific artworks they came across or were shown;
- 11% described themselves as '*investors*' actively looking for works of art that would appreciate in value and generate financial returns; and
- 7% were '*patrons*', who mostly collected to support groups of artists (for example, artists within a local art scene or specific demographic).

The tendency to take risks and buy more spontaneously was connected to some degree with the age of the collector, with a higher share of impulse buyers among Gen Z and millennial collectors than their older peers. It was notable that Boomers were by far the most likely to see themselves as investment-driven collectors (21% versus just 5% of those in the Gen Z cohort and 11% of millennials). There was also a higher proportion of investor-collectors in Asian markets, with Singapore showing the highest overall at 23% (and lowest in Italy at 2% and the US at 6%).

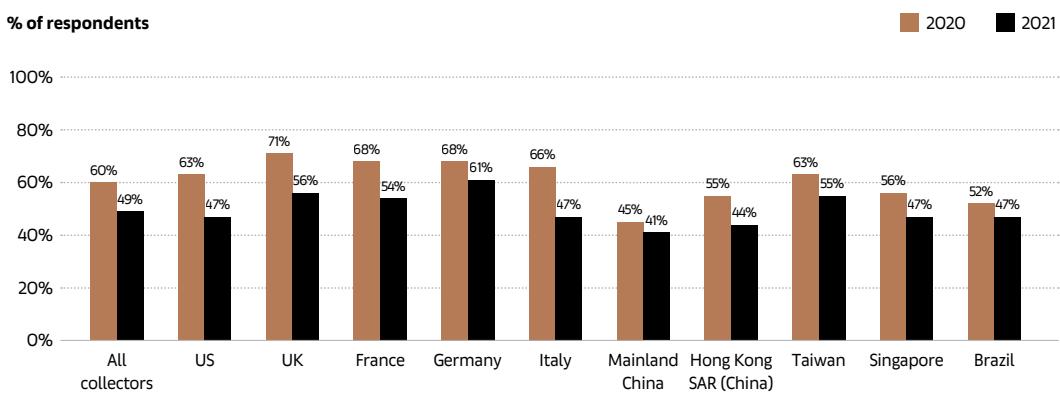
In all markets, the researcher profile accounted for the largest share, with the notable exception of Germany where 38% of collectors described themselves as impulse buyers versus 27% as researchers. The lowest share of impulse buying by a significant margin was in Mainland China (2%), with Singapore and Taiwan also being relatively low (12% and 15% respectively). The highest share of collectors identifying as patrons was in Hong Kong SAR (China) (12%) and the US (10%).

Figure 4.35 | HNW Collector Profiles in 2021**a. Share of All HNW Collectors****b. Share of HNW Collectors by Generation**

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Although a relatively high share of collectors may display some degree of risk aversion when it comes to collecting, it is notable that some of the greatest risk perceived regarding specific purchases of works of art related to their physical condition and authenticity, with 71% of collectors extremely or very concerned about this when purchasing. 64% had a similarly high level of concern over the risk of buying a fraudulent work, and an equivalent 64% also worried that the work would not hold its value or appreciate over time. These issues were ranked higher than those relating to buying at a bad time or not getting the best example of an artist's work.

The risk of a work not holding value or appreciating in value was of particular concern to collectors in the major markets of the US and UK (76% and 73% of collectors respectively being extremely or very concerned), which is notable as only a very small portion of these collectors saw themselves as being investment driven (7% or less). This may be connected to concerns over reselling works, with a relatively high share of collectors in both of these markets having resold works from their collections, but they may have done so for reasons other than financial or capital gains.

Figure 4.36 | Share of HNW Collectors Having Resold Works from Their Collections in 2020 and 2021

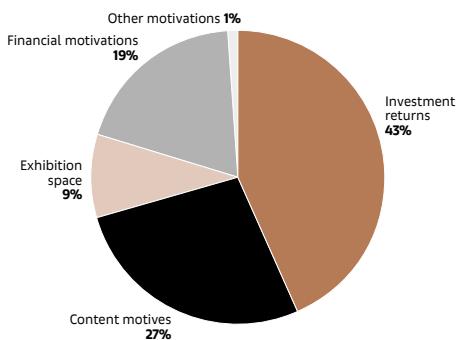
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Also, as evidenced in many previous surveys, although many collectors do not see themselves as being investors, their actions in the market can indicate that they do engage in reselling, and that at least some of this appears to be driven by financial motives. Surveys of HNW collectors in 2019 showed that 61% of the sample had resold works from their collections, and in the current sample, the share having resold works in 2020 was a similar 60%. However, this dropped significantly in 2021 to 49%. Although some aspects of the market improved over 2021, the reduced share may indicate that some collectors held back to see how the market fared, unsure of whether it was a good time to sell.

It is interesting to note that of the collectors who had not resold any works in either 2020 or 2021 (33% of the sample), 81% had never resold a work from their collection. Overall, therefore, 73% of HNW collectors in the sample had resold works from their collections at some stage. This was as high as 80% in the major markets such as the US and UK, and lowest in Mainland China where only half of the collectors had ever resold works.

Younger collectors were more likely to have resold works in 2020 than their older peers (64% of millennial collectors versus 55% of Boomers), however, these converged in 2021 (at 49%) and all generations resold less than in the previous year.

Figure 4.37 | HNW Collector Motivations for Selling Works from their Collections



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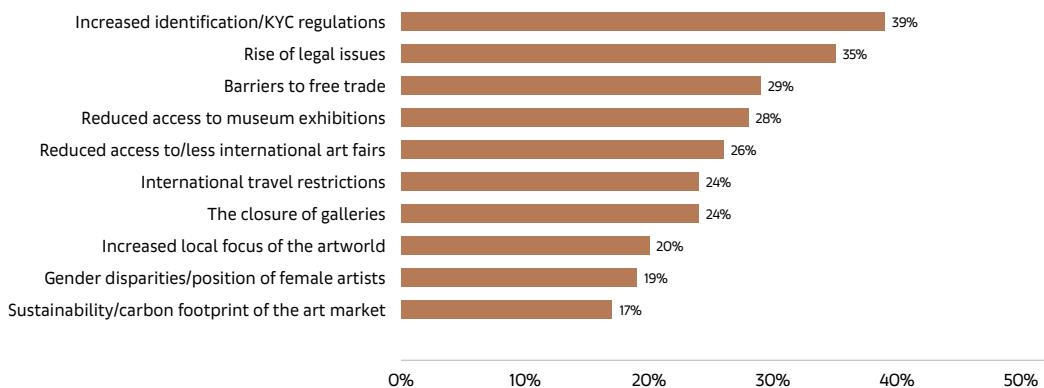
When they were asked about the average length of time between original purchases and resales, very few collectors resold works within a year (6%). However, around 30% of the respondents making resales reported an average of up to three years, and 73% within five years, consistent with previous studies and revealing that of those collectors who resell works, most do so within a relatively short period of time. Although motivations for reselling vary, a majority of the collectors making resales in this sample were driven by financial motives: 43% said they sold to realize some kind of investment or financial return,

such as taking advantage of favorable prices for artists whose work they owned, while 19% had unrelated financial motives (such as needing cash or credit for reasons not connected to collecting).

For others, the drivers for selling related to the content of their collections, such as deaccessioning works that no longer fit with their collecting goals (27%), or due to a lack of exhibition space (9%). Despite having the lowest share of collectors engaging in resales, Chinese collectors were the most likely to have done so for financial reasons (82%). Collectors from Hong Kong SAR (China), on the other hand, were among the least likely to cite financial motivations (47%, second lowest next to German collectors at 45%).

Again, these results show some incongruence between collecting motivations and self-perceptions of collecting, and their actions in the market. Despite only a small minority of 11% of collectors identifying themselves as investment driven, many in practice enter and exit their investments in art on a regular basis and use the art market to invest and divest often over relatively short periods.



Figure 4.38 | Top 10 Concerns of HNW Collectors Regarding the Art Market in 2021

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4.11 | HNW Collectors' Concerns in 2021

Finally, from a list of 15 potential concerns about the current state of the art market in 2021, Figure 4.38 shows the top 10 concerns reported by HNW collectors. The top three centered on legal and regulatory issues in the art market. Increased regulation and identification requirements when transacting, such as '*Know Your Customer*' (KYC) regulations were the most frequently chosen, next to the rise of legal issues in the art trade such as restitution cases, fakes, and forgeries, and the existing and rising barriers to the free movement of art and antiques internationally. Reduced access to travel, events, fairs, and exhibitions were also of key concern to collectors.

Sustainability and the carbon footprint of the art market and its related activities ranked lower but were within the top 10 concerns. 70% of collectors had thought about sustainable options when it came to purchasing works of art and the management of their collections (while 23% had not and 7% were unaware of any), up from 59% in 2019. A majority of 64% of collectors felt it was essential or a high priority to reduce their own personal travel to exhibitions, fairs, and other events, while 68% were concerned with trying to use alternative delivery methods, with a similar share focusing

on using recycling and recyclable shipping products and reducing or consolidating transit and shipping where possible. Next to the COVID-19 pandemic, sustainability and making progress to net-zero carbon emissions was one of the biggest issues of focus worldwide in 2021. The restrictions brought about by the pandemic also helped some collectors to focus on their carbon footprint and question the ways in which they might promote more sustainable practices, both personally and with the galleries, auction houses, and artists they work with. With awareness and sustainable options rapidly growing, it is likely that this will be an even more significant concern for collectors in the coming years.

The restrictions brought about by the pandemic
also helped some collectors to focus on
their carbon footprint and question the ways in
which they might promote more sustainable
practices, both personally and with the galleries,
auction houses, and artists they work with

Outlook

5



Key Findings

Outlook

- 1.** When asked about their plans for 2022, the majority of HNW collectors (53%) were planning to buy art, down by 4% from those planning to do so during 2021. 39% also planned to sell works from their collections in 2022.
- 2.** The pandemic encouraged philanthropic giving among some HNW collectors, with a rise in the share intending to donate works to a museum in 2022, from 29% in 2021 to 43% in this survey, with the highest in France (56%) and the US (50%).
- 3.** The growing interest in digital art was very evident, particularly for younger collectors. Over half of the HNW collectors surveyed (56%) were planning to buy digital art in 2022 and this was highest for millennial collectors (61%), and in Taiwan (71%), Singapore (62%), and the UK (61%).
- 4.** There are no signs that the interest in NFTs will abate in 2022. 88% of HNW collectors said they were interested in purchasing NFT-based artworks in future, and just 4% were not at all interested.
- 5.** On the sales side, most dealers were also optimistic about their prospects in 2022, with 62% expecting an improvement in sales, including 16% predicting a significant improvement, 27% expecting them to be about the same as 2021, and 11% anticipating a decrease. There was optimism in the auction sector too. 81% of second-tier auction houses thought sales would improve and only 6% predicted a decline.

5.1 | Conclusions

The aggregate results for 2021 demonstrate the incredible resilience of the art market. Both the dealer and auction sectors posted a strong uplift in sales, despite lingering restrictions and continued cancellations of some events during the year, making up for the losses of 2020 and bringing the market back to just above pre-pandemic levels. Growth was driven by strong sales at the high end of the market, as the rising wealth of the HNW and UHNW collectors supported demand, and the more buoyant market encouraged vendors. Although this provided a boost to sales, the hopes that the crisis and break from normal schedules would transform the hierarchical nature of the art market were not realized, with the high end pulling away from the rest of the market in 2021 and a denser concentration of value on fewer artists and businesses.

Even before COVID-19, the industry had tended towards a top-heavy market, with businesses selling at higher values typically showing stronger growth in sales than small and mid-sized businesses. The pandemic appears to have intensified the industry's polarized nature, by strengthening the position of businesses whose buyers have enjoyed a greater degree of insulation from the cultural and economic traumas of COVID-19.

While some things have stayed constant, the market has not come out of the COVID-19 crisis unchanged. The wider use of digital sales and communication channels have transformed the market over the last two years. Despite the return to live sales and events in 2021, online sales did not revert to their previous, pre-pandemic levels but were maintained alongside offline activities. While the share of online sales declined from 2020 to 2021, the proportion of sales is now on par with other retail sectors, with the pandemic forcing the art market to catch up with other industries. This was a trend already underway, but the last two years have spurred a major leap forward in how the market uses technology, accelerating changes that may otherwise have taken a decade

The pandemic appears to have intensified the industry's polarized nature, by strengthening the position of businesses whose buyers have enjoyed a greater degree of insulation from the cultural and economic traumas of COVID-19

to develop fully. Many of the technologies used by the market in 2021 will continue to improve over time, both from innovations and enhancements, and simply more widespread use and the feedback that enables. However, while technology has facilitated increased sales and more continuous links to an expanding global audience, it has not yet radically changed many of the structures within the art trade.

In the dealer sector, from a sales perspective, the greater digital focus certainly helped some smaller galleries who have been particularly adept at online sales and promotion, but larger galleries and branded artists have still been among the most significant gainers, as well as attracting the greatest focus on third-party platforms and OVRs. It is notable also that although many smaller and mid-sized galleries reported that they could stabilize or even increase profits by scaling back costs over the last two years, there was little evidence of a substantial shift in business structures or the abandonment of the traditional gallery model. Some did experiment with new ways of exhibiting online, including many interesting collaborations, but few established galleries scaled down their premises or shifted to an online-only model, and even for new companies, online-only galleries still made up a minority of businesses. At the higher end of the market, there were several examples of larger galleries expanding their physical premises and locations in 2021, including Gagosian, Pace, and Hauser & Wirth. The majority of dealers were also bullish about the return to art fairs, with most planning to be as active in 2022 as they had been prior to the COVID-19 pandemic, with many seeing a return to the live events schedule running in parallel with their digital strategies for reaching new clients.

The majority of dealers were bullish about the return to art fairs, with most planning to be as active in 2022 as they had been prior to the COVID-19 pandemic

In the auction sector, which saw the most dramatic recovery in 2021, online sales have produced great efficiencies, particularly for small to medium-sized businesses, moving lower-value sales online as margins have come under increasing pressure and the costs of premises and staffing have become prohibitively high. However, like the dealer sector, in many cases, an increase in online sales in many businesses has come alongside expansions by others in their physical premises and geographical reach. Sotheby's opened a new auction house in Cologne and Phillips launched a new headquarters in Hong Kong SAR (China), while the number of licenced auction houses in Mainland China expanded, with existing houses such as Yongle Auction Company and Holly International opening large exhibition spaces for presale viewings and retail sales. The most valuable sales of the year were in the live-streamed format, with the 'theatre' of the live event still crucially important, even though most of the bidding is done outside of the auction room itself (by phone or online).

The most valuable auction sales of the year were in the live-streamed format, with the 'theatre' of the live event still crucially important

While demand was particularly strong in 2021, with auction houses successfully drawing in many new buyers, securing supply and vendors was as competitive as ever, with larger businesses still having the reputation and financial resources needed to successfully attract consigners. Many of the largest businesses also worked with third parties to create attractive financial incentives for vendors, with most of the highest-priced lots at auction in 2020 and 2021, particularly in the Post-War and Contemporary and Modern sectors, sold under third-party guarantees. These practices affected margins, forcing some businesses to cut costs in other areas, another reason why some larger houses have continued to shift more lower-end sales online and focus on their live sales and marketing of high-end works.

In both sectors therefore, rather than radical changes in structures and hierarchies, the pandemic has rapidly and permanently accelerated the shift to a more digitally based market. The shift online has democratized access to buyers, but rather than leveling the playing field, the issues of getting the online audience's attention in the first place remain more challenging than ever with an increasing volume of online offerings.

The success of the high end of the market in 2021 has undoubtedly also been due to the increasing wealth of HNWIs. While the pandemic pushed many people into extreme poverty, that ran in parallel with adding significantly to the number of global millionaires, with inequality within some nations increasing significantly. Income inequality can change spending patterns over time and the rapid advance in wealth at the top has helped to support luxury markets such as art and antiques. However, the trends to increasing inequality have mixed implications for the art market, and the concentration on fewer artists and businesses leaves it open to risks in its infrastructure and limits its growth.

The success of the high end of the market in 2021 has undoubtedly also been due to the increasing wealth of HNWIs

As billionaires saw the most extreme rise in their wealth ever recorded in 2020, wealth inequality continued to be a key political issue of focus over 2021, with many governments concentrating on ways to address the extreme divide within nations. According to the UBS Chief Investment Office (2022), while the pandemic increased wealth inequalities, it also accelerated political forces in favour of wealth redistribution, citing measures that were debated or introduced in 2021 such as a global minimum corporate tax, higher US corporate and upper income tax rates, and China's 'common prosperity' drive.⁵⁷ They believe that the continued focus on inequality is likely to see fiscal policies becoming more redistributive over the next decade, and while this might have negative effects in the short term for both investors and the high end of the art market, these changes could be positive if they boost aggregate economic growth by increasing the spending capacity of the average household, leading to a wider level of spending in the art market and more balanced growth.

⁵⁷ UBS Chief Investment Office (2022) 'The Decade Ahead. Year 2022'.



5.2 | Outlook for 2022

Apart from reflecting on 2021, the dealers, auction houses, and collectors surveyed in this report were also asked about their outlook for 2022.

While rising wealth may give collectors the ability to purchase more, the level of optimism about the market and the wider economic context is just as crucial to their plans for collecting. Despite the continuing uncertainties in 2021 over the pandemic and its prolonged effects, when they were surveyed in December 2021, most HNW collectors (74%) were optimistic about the global art market's performance over the next six months, a slightly larger share than those optimistic about global stock markets (70%). This majority was consistent across regions, with lower levels of optimism in Taiwan and Germany, mainly due to more collector uncertainty. Over all markets, 18% of HNW collectors were unsure of how the art market would fare during the first half of 2022, with a continuing lack of certainty regarding the adjustments to plans that may still need to be made as the COVID-19 pandemic moves to its next phases.

Optimism about the art market was also stable over the longer term. Boomer collectors were somewhat less confident than their younger peers about short-term performance but their views improved and converged over time. The outlook collectors had for the art market was roughly on par – or slightly more optimistic in most cases – with their views on the global stock market over these periods (which were equally, relatively stable over time).

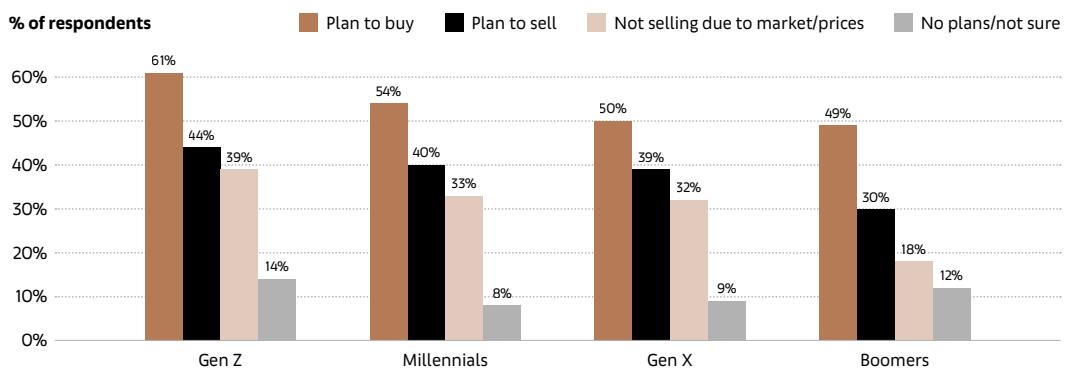
Despite the continuing uncertainties in 2021 over the pandemic and its prolonged effects, most HNW collectors (74%) were optimistic about the global art market's performance in 2022

Table 5.1 | Outlook of HNW Art Collectors over the Short-, Medium-, and Long-Term**a. Outlook for the Global Art Market**

Next 6 months	Total	US	UK	France	Germany	Italy	Hong Kong		Taiwan	Singapore	Brazil
							Mainland China	Kong SAR (China)			
Optimistic	74%	79%	78%	79%	68%	80%	69%	69%	66%	68%	82%
Neither/not sure	18%	16%	14%	17%	20%	16%	21%	23%	25%	17%	14%
Pessimistic	8%	4%	8%	3%	13%	4%	9%	7%	10%	14%	3%
Next 12 months											
Optimistic	72%	76%	76%	80%	80%	70%	69%	65%	59%	59%	85%
Neither/not sure	20%	16%	18%	11%	17%	23%	28%	21%	32%	26%	12%
Pessimistic	7%	8%	6%	9%	3%	8%	3%	14%	10%	14%	3%
In 10 years											
Optimistic	74%	80%	79%	79%	68%	79%	70%	65%	62%	67%	85%
Neither/not sure	19%	14%	16%	14%	27%	18%	23%	27%	23%	27%	11%
Pessimistic	7%	6%	5%	7%	5%	3%	7%	8%	15%	12%	3%

b. Outlook for the Global Stock Market

Next 6 months	Total	US	UK	France	Germany	Italy	Hong Kong		Taiwan	Singapore	Brazil
							Mainland China	Kong SAR (China)			
Optimistic	70%	77%	76%	77%	64%	64%	68%	62%	57%	66%	81%
Neither/not sure	19%	15%	15%	15%	23%	28%	21%	20%	27%	18%	12%
Pessimistic	11%	8%	8%	8%	14%	8%	11%	17%	17%	16%	7%
Next 12 months											
Optimistic	70%	75%	76%	76%	68%	74%	66%	59%	59%	62%	83%
Neither/not sure	21%	19%	14%	18%	23%	19%	29%	29%	29%	20%	14%
Pessimistic	9%	7%	10%	6%	9%	7%	6%	12%	13%	18%	2%
In 10 years											
Optimistic	73%	79%	73%	79%	65%	79%	66%	65%	66%	65%	87%
Neither/not sure	19%	15%	19%	13%	26%	17%	27%	24%	22%	19%	11%
Pessimistic	8%	6%	8%	8%	10%	4%	7%	11%	13%	16%	2%

Figure 5.1 | HNW Collector Intentions for Purchases and Sales of Art by Generation in 2022

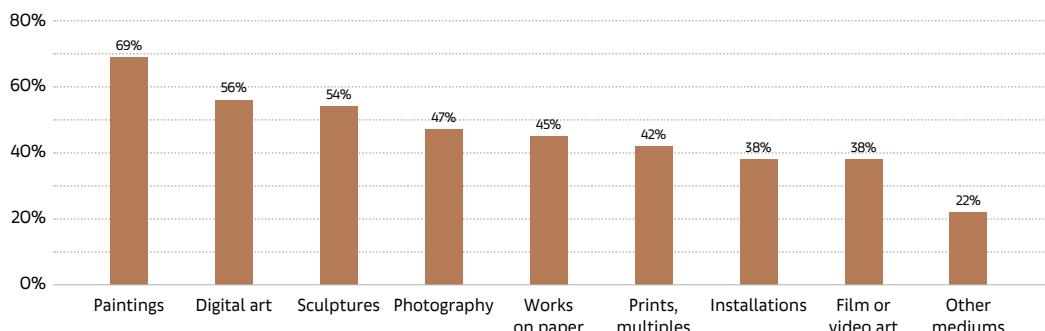
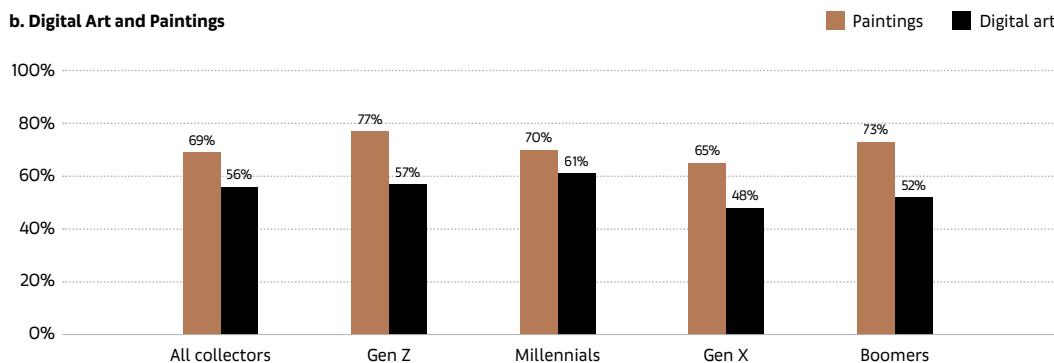
© Arts Economics (2022)

When asked about their plans for 2022, the majority of HNW collectors (53%) intended to buy art, down by 4% from those planning to do so during 2021. This ranged from just less than half of respondents in the US, France, Hong Kong SAR (China), and Singapore to as high as 75% in Brazil. However, more collectors planned to sell works than was the case 12 months previously.

In terms of what they were hoping to buy, the growing interest in digital art was very evident, particularly for younger collectors. A majority of HNW collectors were interested in buying paintings, digital art, and sculptures. Paintings were the key medium of interest for collectors of all ages, and for most regions, but over half of the HNW collectors surveyed (56%) were also interested in buying digital artworks (up from 48% in a mid-year survey of five regions in 2021),⁵⁸ and this was highest for millennial collectors (61%), and in Taiwan (71%), Singapore (62%), and the UK (61%).

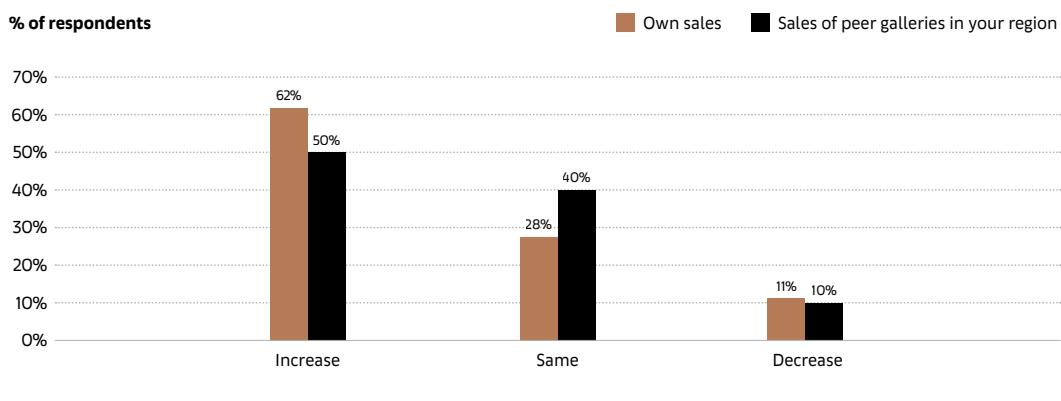
Across all markets, 39% of HNW collectors planned to sell works from their collections in 2022, up by 4% on the numbers reported at the end of 2020. The greatest share of collectors planning to sell were in Germany and Taiwan (48% each) and fewest in Mainland China (29%). Gen Z and millennial collectors had a higher level of activity planned for 2022 than their older counterparts in all markets, but across all generations, only a very small minority of collectors stated that they had no plans to buy or sell in the coming year.

⁵⁸ See Arts Economics (2021) *Resilience in the Dealer Sector, A Mid-Year Review*. Art Basel and UBS, available at artbasel.com/about/initiatives/the-art-market.

Figure 5.2 | HNW Collector Intentions for Purchases of Art by Medium in 2022**a. All Mediums****b. Digital Art and Paintings**

© Arts Economics (2022)

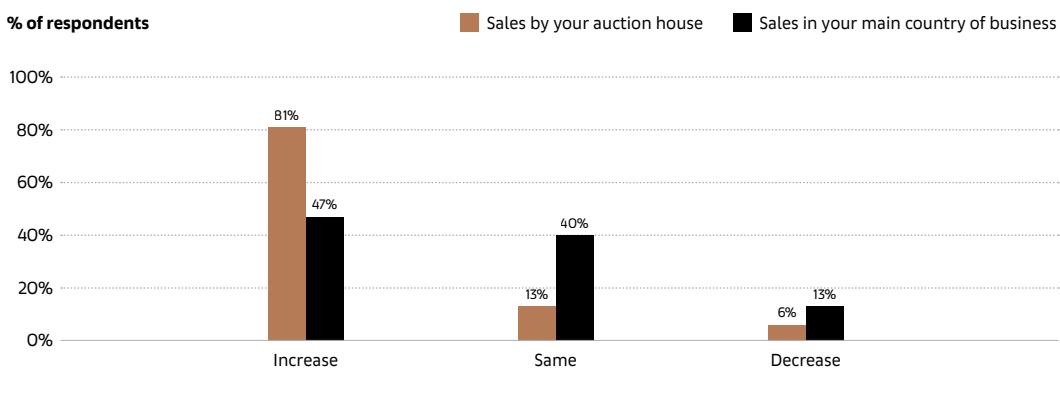
The pandemic also encouraged philanthropic giving among some HNW collectors, with a rise in the share intending to donate works to a museum over the next 12 months, from 29% in 2021 to 43% in this survey, and with the highest in France (56%) and the US (50%).

Figure 5.3 | Dealers' Outlook for Sales in 2022

© Arts Economics (2022)

On the sales side, most dealers were also optimistic about their prospects in 2022. As noted in Chapter 2, the surveys of the sector showed that a majority (62%) of businesses felt that their sales would increase, up by 4% compared to the end of 2020, and with a smaller share of 11% expecting a decline (versus 15% at the end of 2020). While a majority of dealers at all levels expected sales to improve, the largest businesses continued to be the most optimistic about 2022, with nearly all of the dealers with sales of greater than \$10 million anticipating either stable (37%) or rising sales (62%). The greatest share of dealers expecting declines were in the lower turnover segments of less than \$500,000, including 15% of those with turnover of less than \$250,000.

Dealers tended to be more positive about their own business' performance than peer galleries. When asked how they felt about the prospects for other galleries of the same size and in the same sector, although nearly 30% said they were unsure how their peers would perform, of those that had an opinion, only 44% thought their sales would improve. Similarly, only around half of the sample thought peer galleries of any size in their same country or region would improve (excluding 12% who were unsure of how they would perform). This greater optimism about their own prospects may be due to a greater sense of awareness and control of strategies for the coming year, but also indicates a degree of self-efficacy that may prove important for future performance.

Figure 5.4 | Second-Tier Auction Houses' Outlook for Sales in 2022

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There was optimism in the auction sector too. 81% of the second-tier auction houses surveyed in 2021 thought sales would improve in 2022 (versus 77% when asked 12 months before), and only 6% predicted a decline. And again, these businesses were also much more optimistic about their own sales than of auction sales of art and antiques across all businesses in their region, although even in this case only a minority of 13% expected a drop in sales.

One of the most significant developments in the wider art industry in 2021 was the explosion of interest in NFTs, even if for now most NFT sales have been outside the traditional art market. As with all disruptive technologies, there are pros and cons of the developments so far. As discussed in Chapter 1, the potential benefits are many. Collectors can buy and sell NFTs easily, store them cheaply, and prove their provenance. Artists have a new channel for creation and sales, and can exert more control over their markets, determining the scarcity of their works, selling them directly if they wish to, and possibly earning royalties. However, there are also numerous risks. Potentially anyone can mint an NFT for a very low cost, create a file, and turn it into an NFT, even if they have no right to the content, and with intellectual property infringements often difficult to contest due to the anonymity conferred by them. Although there are more energy-efficient platforms emerging, there is still much criticism about the amount of energy required to mint or transfer an NFT. Their liquidity and ease of transacting has also encouraged rampant speculation as well as more dubious practices such as 'wash trading', which exist in a legal grey area for now due to the

lack of regulation. Apart from problems with scams and semi-llicit operations, the purely speculative nature of the industry has also put off some artists and collectors, with rewards for short-lived popularity, little regard for content or quality, and a primary focus on short-term financial returns. While fraud and low-quality art are issues in the traditional market also, the speed of transacting has made it much easier to engage in more speculative buying and selling in this market.

The development of NFT platforms for art to date, much like that of the online art space generally, has been themed around accessibility and democratization, bridging the gap between the top collectors, artists, and galleries and the wider public, as well as disintermediation, bringing artists into direct contact with buyers. Digitization has offered cost reductions in the production of works, while these platforms allow art to be exhibited and sold at low cost and without the control of traditional gatekeeping intermediaries. Although this has spurred the creation of new work that may otherwise never have reached the market, this unfiltered production and dissemination also tends to create an over-supply of low quality, derivate, and amateur products that have remained unappealing to many collectors. The quality or otherwise of the art produced and sold also has little relevance to those flipping and reselling NFTs over very short periods for financial gains and even less for those involved in illegal or semi-legal transactions.

Therefore, while these platforms facilitate access to artists, without information or valid signals on value or quality of their work, the intermediation of dealers or other parties in vetting and sorting information is still highly beneficial to both artists and collectors, and the role of NFTs in disrupting the traditional art market's infrastructure through removing the need for intermediation was not evident in 2021. They did however add a new layer of sellers and intermediaries into the market and expanded the base of buyers interested in art and collectibles. And there was evidence that once buyers had become interested in art through these platforms, they did cross over to traditional gallery and auction sales, including those at the highest end, although this may be related more to wealth made through the development of technology and cryptocurrency markets, rather than to NFTs themselves.⁵⁹

⁵⁹ A notable example being the Sotheby's sale of Alberto Giacometti's *Le Nez* (1965) for \$78.4 million to Justin Sun, the founder of the cryptocurrency platform Tron, see ft.com/content/4336bb9a-74c9-47f1-a2ad-eafa79bad287e.

There are no signs that the interest in NFTs will abate in 2022. 88% of the HNW collectors surveyed said they were interested in purchasing NFT-based artworks in future, and just 4% were not at all interested.⁶⁰ Data from NonFungible.com on the sales of art and collectibles-related NFTs on external NFT platforms, discussed in Chapter 1, showed values were already 17% of the level of traditional art sales in 2021, including only those on the Ethereum, Ronin, and Flow blockchains. The data also shows the value traded in art-related NFTs in just one month in January 2022 was 15 times higher than the total sum of both 2019 and 2020.

2022 is likely to provide a more telling year to assess whether this kind of growth in both the art market and these NFT platforms can be maintained. It will also allow a chance to more fully understand the impact of changes in the market post-pandemic, as travel and events begin to gain fuller momentum, and to assess how adaptable the art market has really been to changed consumer behaviors and new economic realities.

⁶⁰ Of those that remained, 7% were interested in NFTs in other segments (just not art) and 1% were still unsure.

Appendix



Appendix: Sources Used in *The Art Market 2022*

The information and data compiled for *The Art Market 2022* comes from a range of sources. All of the data is gathered and analyzed directly by Arts Economics from dealers, auction houses, art fairs, art and antique collectors, art price databases, financial and economic databases, industry experts, and others involved in the art trade and its ancillary services.

For the purposes of this research, the art and antiques market includes sales of fine and decorative art and antiques. Fine art includes paintings, sculptures and works on paper (including watercolors, prints, drawings, and photographs), tapestries, as well as film, video, and other new media.

Decorative art and antiques covers objects such as furniture and decorations (in glass, wood, stone, ceramic, metal, or other material), couture (costumes and jewelry), ephemera, textiles, and other antiques.

This report also presents some data on the sale of NFTs external to the art market, taking place on the Ethereum blockchain, reporting on the sales of art and collectibles NFTs (see below).

I. Auction Data

The auction sector provides one of the main large-scale, international, and publicly available information sources on individual transactions in the art market. Even though the results of many auction sales are in the public domain, aggregating data within this part of the market is not without issues, particularly on a global scale, with some auction houses publishing limited, selective, or no results at all. There is no single comprehensive source or database that covers the entire global auction market for fine and decorative art and antiques. Auction data for 2021 used in this report therefore comes from five main sources:

a. Artory

Global auction data is supplied by Artory (artory.com). Artory's database covers 4,000 auction houses with over 35 million records, with consistent auction results gathered annually for 250 businesses in 40 countries and 500,000 artists. The database comprises results from major sales in top- and second-tier auction houses around the world, and it does not restrict inclusion by final price or estimate value, hence, offering coverage of the full range of prices and sales. The company's first product, the Artory Registry, is a blockchain registry of verified information from trusted art institutions about artworks, collectibles, and their history. Artory also leverages the trusted artwork information to tokenize physical artworks to prepare them for safe and efficient trade in the financial and crypto markets. Since the Registry fully launched in late 2019, Artory has built a unique global database that includes public auction records as well as verified and registered physical and digital artworks, with an estimated value of over \$1 billion.

b. AMMA

Both fine and decorative auction data for the Chinese art market is supplied by AMMA (Art Market Monitor of Artron). Artron.net was founded in 2000 as an interactive online community devoted to Chinese works of art. AMMA is a market-data service platform for Chinese works of art and the research institution of Artron Art Group, focusing on data search, artwork valuation, indexing, data reporting, and other relevant services of the Chinese market. It has the most comprehensive and reliable available database on the Chinese art market, with over 6.8 million results from more than 33,000 sales from over 1,000 auction houses since the first art auction in China in 1993. There are roughly 600,000 additions to the database annually.

c. ATG

Data on sales via third-party auction platforms was supplied for this report by ATG (Auction Technology Group). ATG operates seven industry-leading digital marketplaces across the art and antiques and industrial and commercial sectors (the-saleroom, lot-tissimo, Proxibid, BidSpotter US, BidSpotter UK, i-bidder and, since 1 October 2021, LiveAuctioneers). Together, the marketplaces connect 800,000 bidders from 160 countries to 3,800 auction houses hosting 70,000 auctions per year. In this report, LiveAuctioneers data has been listed separately to that of ATG because LiveAuctioneers joined ATG after the end of its 2021 financial reporting period.

d. Auction House Published Results

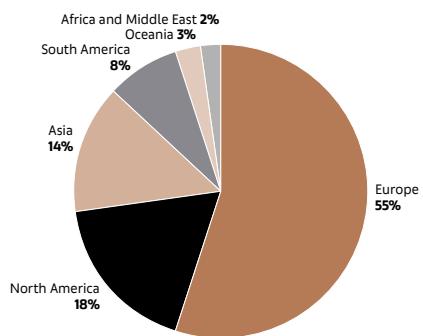
To supplement the coverage provided by these databases, Arts Economics has also developed its own internal, international auction database, collecting data directly on an annual basis from the published auction results and press releases of auction houses. As Artron does not cover online auction sales, these were also collected directly by Arts Economics from all of the major auction houses in China.

e. Auction House Survey

Arts Economics distributes two surveys in the auction sector: a comprehensive top-tier survey of the top 10 auction houses worldwide plus a second-tier survey of around 500 national second-tier auction houses (with a response rate of 18%). The auction surveys provide additional sales data as well as a range of other more in-depth information on employment, buyers, profit margins, debts, and other aspects of the auction market that are used in the report. The surveys are sent directly to the auction houses from Arts Economics' database.

For historical auction data, various sources were used in compiling previous reports, including Auction Club (2017), Collectrium (2016), Artnet (2011–2015), and Artprice (2008–2010).

Figure A1. | Geographical Distribution of Respondents in 2021



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II. Dealer Data

Data on dealer sales is more complex to gather due to the private nature of transactions in the sector. Most of the companies in the sector are small businesses with only a very small number of publicly listed companies, which means detailed information and financial results in public and private databases is limited.

Numerous official sources and company reports are used in compiling figures on the sector. These include Eurostat, the US Bureau of Labor Statistics, the Office for National Statistics in the UK, Companies House, Insee, Infogreffé, the National Bureau of Statistics of China, and

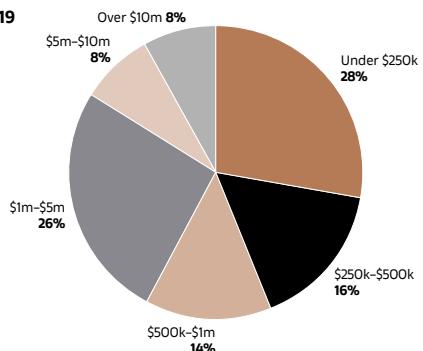
many others. Some of these sources are limited in scope and coverage and, in some cases, publish data with a significant lag and only for a very small proportion of companies relevant to this report. Comparisons are also problematic between nations due to differences in recording, classifications used, the records required and how they are defined and recorded, and the classification of companies by sector and activity.

To overcome the lack of publicly available data, surveys of this sector are an essential element of the research process. These surveys have been carried out by Arts Economics on the dealer sector consecutively for over 15 years, providing a means for tracking and analyzing trends over time. To compile data, Arts Economics conducted two dealer surveys in 2021. The first was in July (with 701 usable responses) concentrating largely on employment and the role of dealers, and a second in December focusing on sales and strategies (with 774 usable responses). The survey was distributed to the memberships of some of the main dealer associations around the world, including CINOA, ADAA, CPGA, SLAD, FEAGA, and other national associations. It was also distributed by Art Basel directly to over 425 individual galleries who participated in their shows in Basel, Miami Beach, and Hong Kong and through OVRs in 2021.

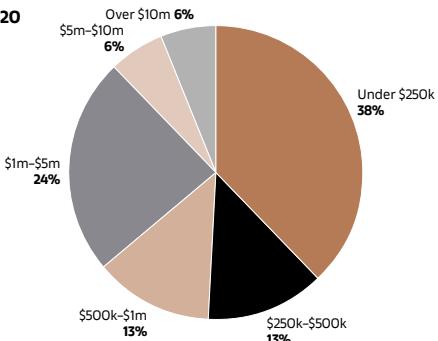
The galleries covered in the end-of-year survey were geographically diverse, covering over 48 different markets. The highest regional share in this survey was galleries and dealers from Europe (55%), with 18% from North America. 89% of the dealers responding were fine art dealers and

Figure A2. | Share of Respondents by Reported Annual Turnover 2019–2021

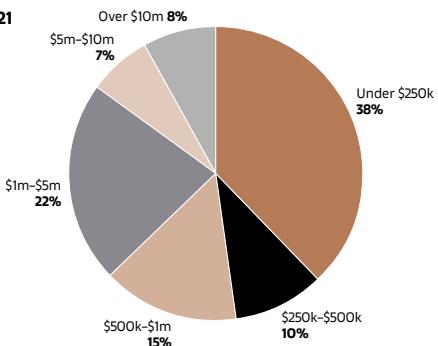
a. 2019



b. 2020



c. 2021



11% were businesses working in the antiques and decorative arts sectors.

Respondents to the survey varied in the size of their annual sales turnover. 63% had annual sales of less than \$1 million, including just under half (48%) with sales of less than \$500,000 (down from 51% in 2020). 8% reported sales in excess of \$10 million (up from 6% in the global dealer survey conducted in 2020, and on par with the share in 2019). A further breakdown of the three past years are provided in Figure A2.

The dealers covered in the survey are estimated to account for between 70% to 80% of the value of sales in the sector, depending on the country. The survey allows us to estimate the value and changes in this core majority share of the market, while the addition to sales from the remaining, very numerous, small businesses are very conservatively estimated based on official statistics and censuses that report sales by industry, business, or sector. As some of the highest-selling dealers may not answer surveys, the results are also checked and adjusted using the reported turnover of the highest-selling galleries and dealers as reported in Companies House, as well as other databases of company records. The survey was supplemented by a series of interviews with dealers in different sectors and countries conducted from June 2021 to January 2022 to gain in-depth insights on the art market, which were used to inform the analysis in the report and help interpret the findings.

III. NFT Data

Data on sales of NFTs on NFT platforms and marketplaces was supplied for this report from NonFungible.com was initially launched in 2018 to track real-time transactions of Decentraland, but has evolved into the largest NFT database worldwide, covering all of the NFT sales on Ethereum, Flow, and Ronin blockchains and reporting almost 50 million sales since its inception, including over 21 million in 2021.

It is important to note that the sales reported by NonFungible.com correspond to the 'qualified' volume of NFT transactions, that is, any transaction or activity that can be associated with legitimate market activity or an existing project. The total value of activity identified over 2021 amounts to \$55 billion, for approximately \$18 billion of qualified trading, the rest being unqualified activity or 'noise' in the industry. Sales on the Ethereum blockchain are estimated to cover over 90% of the value of all sales of NFTs that took place in 2021. NonFungible.com currently only supports transactions that occur on the Ethereum (in the main standard of NFT, the ERC-721), Ronin, and Flow blockchains. They do not cover sales that occur off-chain or side chain activity or sales supported by alternative technological standards that have developed on the Ethereum blockchain, such as the ERC-1155 (Semi Fungible) and the ERC-998 (Composable NFT), or some less frequently used blockchains such as EOS, Tezos, Solana, WAX, or Bitcoin SV.

The main data reported in Chapter 1 was sales of art and collectibles NFTs as defined by NonFungible.com. NonFungible.com tracks sales across a range of segments including art, collectibles, metaverses, gaming, and utilities. These segments are defined by NonFungible.com as follows:

- *Art* – Artistic NFTs and collections generated by artists or by generative art algorithms. Collections of type '10,000' were not considered as art but as collectibles.
- *Collectibles* – A project or asset whose primary function is to be collected. This can be avatars or profile pictures (PFP), planets, animals, or any type of digital object. By extension, these collectible assets can have several uses, including to be part of a community or to be used for video games.
- *Video games* – Any video game project using NFTs in its gameplay. This can be weapons or equipment, unique weapons or character appearances (skins), or any other object that participates in the game universe.
- *Metaverses* – Interconnected virtual worlds, with NFTs mostly representing virtual land in this segment. They can also take the form of clothing and accessories used to personalize an avatar.
- *Utilities* – These cover a wide variety of use cases, from domain names to concert tickets. This can also be badges or access keys which provide access to exclusive content.

IV. Art Fair Data

Data on the art fair calendar and changes over the last two years was supplied by artfairmag (artfairmag.com). Artfairmag is a database tracking about 400 regional and international fairs around the world, including information on timing, location, date, and type of art sold. Artfairmag was founded by Pauline Loeb-Obrenan in 2019, who prior to starting the database worked at Galerie Kugel in Paris for eight years. Artfairmag also provides insights from interviews with art fair directors and gallerists about their events and exhibitions.

V. Contributions from External Authors

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Diana Wiericki is a Partner and the Global Head of the Withers Art law practice. She advises clients on art purchases, sales, loans, consignments, and charitable and tax planning. Her clients include the industry's top collectors, dealers, galleries, charitable organizations, artists, and museums. She has been quoted in various news outlets, including The New York Times, CNN, Bloomberg Business, BBC, and Barron's, and she has written articles in publications such as *Forbes*, *Trusts & Estates*, *Crain's*, and *Wealth Management*, and is the co-author of the Fifth Edition of *Art Law: The Guide for Collectors, Investors, Dealers & Artists*. As an active member of the art community, Diana serves as co-Chair of the Appraisers Association of America's Art Law Day, as Chair of the New York City Bar Association's Art Law Committee, and co-Chair of the American Bar Association's Art and Collectibles Committee. She is also a member of the Professional Advisory Council of the Metropolitan Museum of Art, the Planned Giving Advisory Council of the New York Historical Society, ArtTable, and an affiliate member of the Association of Professional Art Advisors.

Amy Whitaker

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Amy Whitaker is a writer, artist, and researcher working at the intersections of business, politics, and art. She is an assistant professor at New York University in visual arts administration. Stemming from Amy's longstanding engagement in the social practice of teaching business to artists, this research has contributed new methods of art market analysis that center on artists and archival materials. These structures, in turn, inform policies of economic redistribution in democratic societies.

Amy's research on issues in the arts related to fractional equity, blockchain, entrepreneurship, and other areas have been featured in many academic journals and she is the author of three books: *Museum Legs*, *Art Thinking*, and *Economics of Visual Art: Market Practice and Market Resistance*. In 2021, she was also the recipient of EURAM's Edith Penrose Award for 'trailblazing' research. Amy taught previously at Williams College, the School of Visual Arts, RISD, California College of the Arts, and the Sotheby's Institute. Before entering academia, she worked for the Guggenheim, the Museum of Modern Art, and the Tate, as well as for the artist Jenny Holzer and the investment firm D.E. Shaw & Co., L.P. Amy holds a PhD in political economy from Goldsmiths, University of London, an MBA from Yale, an MFA in painting from the Slade School of Fine Art, and a BA in political science and studio art from Williams College. Amy thanks art appraiser Muriel Quancard and finance professor David Yermack for their helpful comments on her Exhibit on NFTs in the report.

Simon Denny

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Simon Denny is a New Zealand-born artist who lives and works in Berlin. He makes exhibitions that unpack the social and political implications of the technology industry and the rise of social media, startup culture, blockchains, and cryptocurrencies, using a variety of media including installation, sculpture, print, and video. He studied at the Elam School of Fine Arts, University of Auckland, and at the Städelschule, Frankfurt am Main.

Simon has curated significant exhibitions about blockchain and art such as Proof of Stake at Kunstverein in Hamburg (2021) and Proof of Work at Schinkel Pavillon, Berlin (2018).

Recent solo exhibitions include K21-Kunstsammlung Nordrhein-Westfalen, Düsseldorf (2020); the Museum of Old and New Art (Mona), Tasmania (2019); MOCA, Cleveland (2018); OCAT, Shenzhen (2017); Hammer Museum, Los Angeles (2017); WIELS Contemporary Art Centre, Brussels (2016); Serpentine Galleries, London (2015); MoMA PS1, New York (2015); Portikus, Frankfurt (2014); MUMOK, Vienna (2013); and Kunstverein Munich (2013). He represented New Zealand at the 56th Venice Biennale in 2015. His works are held in institutional collections including Hamburger Kunsthalle (Hamburg), Kunstsammlung Nordrhein-Westfalen, (Düsseldorf), MoMA (New York), Walker Art Centre (Minneapolis), Kunsthaus Zürich (Zürich), Sammlung zeitgenössischer Kunst der Bundesrepublik Deutschland (Berlin), and Museum of New Zealand Te Papa Tongarewa (Wellington).

He co-founded the artist mentoring program BPA/Berlin Program for Artists and serves as a Professor of Time-Based Media at The Hochschule für bildende Künste Hamburg.

VI. Other Online Data Sources

Data on website traffic was taken from SimilarWeb in the months between December 2021 and January 2022. This data is dynamic and changes over time. It should therefore be considered only as a relative view of the companies presented at a point in time. Other data was taken directly from social media sites, including Facebook, Instagram, and Twitter.

Artsy also supplied data to the report on their auction sales and other e-commerce, along with valuable information from their own gallery research (artsy.net).

Data and background information on infringements related to art-based NFTs was also supplied with thanks to Deviant Art (deviantart.com).

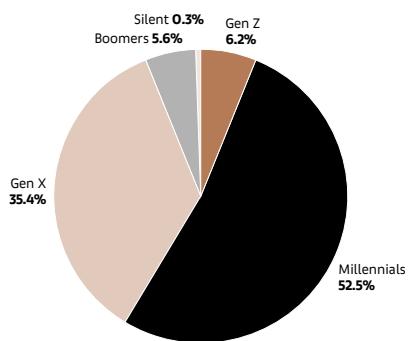
VII. UBS Investor Watch Survey

Arts Economics partnered with UBS Investor Watch to conduct a survey of HNW adults in 10 different markets in 2021. The survey used panels provided by Dynata from the following markets:

- US - Singapore
- UK - Hong Kong SAR (China)
- France - Mainland China
- Germany - Taiwan
- Italy - Brazil

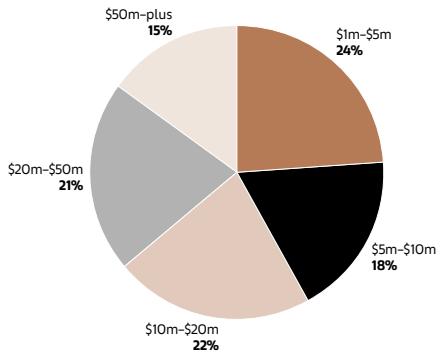
The survey received full, qualified responses from 2,339 collectors from these regions. To be included, respondents were required to be HNW individuals, defined here as having a current net worth, excluding real estate and private business assets, in excess of \$1 million. To ensure they were currently active in the art market, they were required to have purchased fine or decorative art in both 2020 and 2021. In order to make sure that they were also active enough in the market to be able to offer insights on trends in spending, sales channels, and other behaviors, they were excluded from the survey if they had not spent more than \$10,000 on art and collectibles in each of the years 2020 and 2021. This screening process continued until there was a minimum of 400 suitably qualified responses for the US, 300 from Mainland China, and 200 from each of the other markets surveyed. The individuals in the sample all had household investable assets in excess of \$1 million, excluding real estate and business assets. 34% of the total sample had wealth of between \$1 million and \$5 million, 17% of between \$5 million and \$10 million, and the remaining 48% of over \$10 million (including 15% in the ultra-high net worth category of \$50 million-plus).

Figure A3. | Age Profile of HNW Collectors Surveyed in 2021 (All Markets)



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Figure A4. | Wealth Level of HNW Collectors Surveyed in 2021 (All Markets)



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As in previous years, although the questionnaire was distributed across a broad range of age groups, the age breakdown of qualified respondents was dominated by millennials (52%) and Gen X collectors (35%), reflecting the most currently active collecting segments in the market. For the purposes of this survey, Gen Z are defined as those collectors who are under 24 in 2021, millennials are 24 to 38 years old, Gen X are 39 to 54 years, Boomers are 55 to 73 years, and Silent are 74 years and over. Boomer and Gen Z segments accounted for just 12% of the total respondents, with many screened out during sampling.

The \$10,000 expenditure minimum was introduced as a screening criterion in 2019 but covered a period of two years. In 2020 and 2021, the criteria were more stringent, with respondents required to have spent \$10,000 in both of the two years to ensure respondents were regular and active collectors. Along with the changing regional composition, this introduced some issues in direct comparability over time, as well as changing the age demographic of the sample. Respondents in the sample are skewed towards younger collectors, which is important in interpreting some of the results. The share of millennials in the entire population sampled from (i.e. including those screened out) was 29% of the total, with 22% Gen X, 41% Boomers, 1% Silent generation, and 7% Gen Z.

It is clear that the sampling process and screening criteria (activity and spending requirements) meant that a significant share of Boomers were screened out of the sample, despite being a key segment of collectors. The average age across all countries was 39 years, ranging from 35 years in Brazil to 44 in the US.

The overall gender breakdown of the aggregate sample was 39% female, 61% male, with just less than 0.5% identifying as non-binary. All respondents had personal wealth in excess of \$1 million (excluding real estate and private business assets), with a majority (58%) in excess of \$10 million, including 15% in the ultra-high net worth (UHNW) category, defined here as wealth over \$50 million. The highest share of UHNW adults was in Germany (31%) and Mainland China (30%), consistent with previous years' samples.

VIII. Other Secondary Sources

The report uses a large number of secondary sources and these are cited throughout the report. Some key sources used for data in the report on a regular basis include:

- *UBS Year Ahead 2022*;
- *Forbes Billionaire Lists and Database*;
- *The IMF World Economic Outlook (Database)*;
- *UN Comtrade Database (Imports and Exports)*;
- *Credit Suisse Global Wealth Databooks and Reports (various years)*;
- *Eurostat Labour Force Surveys*;
- *Bureau of Labor Statistics Database*;
- *USITC DataWeb*; and
- *HM Revenue & Customs UK Trade Database*.

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For this UBS Investor Watch collaboration, 2,339 high net worth individuals were surveyed (with at least \$1 million in investable assets) that had spent \$10,000 or more on art and/or antiques in both 2020 and 2021. The global sample was split across 10 markets: the UK, the US, Mainland China, Singapore, Taiwan, Hong Kong, France, Italy and Germany and Brazil. The survey was conducted in December 2021.

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