The Art Market | 2017

An Art Basel & UBS Report

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Founder of Arts Economics

Art | Basel | UBS

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Acknowledgements

The Art Market | 2017 presents the results of a comprehensive and macro-level analysis of the global art and antiques market in 2016. This study looks at the key trends in the global art and antiques trade, reporting on how different regions, sectors and value segments of the market have performed.

The information presented in this study is based on data gathered and analyzed directly by **Arts Economics** (www.artseconomics.com) from dealers, auction houses, art and antique collectors, art and financial databases, industry experts and others involved in the art trade. (The Appendix outlines some of the key data sources used in the report.)

Chapter 1 provides an overview of the global market, looking at the value, volume and regional distribution of sales of art and antiques in 2016 and the decade leading to it. It also reviews the performance of some of the major national and regional art markets in this period.

Chapter 2 focuses on dealers and galleries, reporting on sales and other key indicators in different value segments and sectors of the market, and drilling down into important areas such as profitability, supply, inventories, financing and buyers. It presents findings on the primary market and the secondary resale market, distinguishing them in terms of dealer turnover, artist representation and other features. It also provides an overview of exhibitions by region, sector and top ranking artists.

Chapter 3 reports on the auction sector, looking again at sales by region and value segment. The chapter focuses on the varying performance of the lower, middle and upper value segments of the market in the period from 2006 to 2016.

Chapter 4 addresses the small but growing online art market, reporting on its size and key structural features.

Chapter 5 presents a comprehensive analysis of the principal fine art sectors, using auction and exhibition data to describe their performance in terms of sales, regional market share, prices, segmentation and artists.

Chapter 6 provides a contextual overview of world wealth, showing how changes in the size and distribution of wealth within and between regions are shaping trends in the art market. This chapter focuses on high net worth wealth and presents the results of a survey of US high net worth individuals carried out for the report by UBS and Arts Economics.

Chapter 7 discusses the significant economic contribution the art market makes to the economies in which it operates, through adding employment and revenues directly and through a range of ancillary industries supported by the art trade. It concludes the report by reviewing some of the key issues that may shape the market going forward in 2017.

An important part of the research each year involves a global survey of art and antique dealers. I would like to say a special thanks 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. Thanks also to Joe Collinson and Melissa Netecke for helping to distribute the survey. My sincerest thanks to all of the individual dealers who took the time to support this research by completing the surveys. I am also extremely grateful to all those dealers who shared their valuable insights on the art market through interviews and discussions during the year.

Many thanks also to all of the top and second-tier auction houses that also took part in the auction survey. Thanks especially to Susan Miller (Christie's), Jack Shaw (Sotheby's) and Lisa King (Phillips). Thanks also to the online companies for their support of the survey and in providing other information on the sector, and to UBS for their help and cooperation with the survey of US HNWIs.

The primary art auction data supplier for this report was Collectrium, and I had invaluable assistance particularly from Amber Sherman whose dedicated and informed support was very much appreciated in assembling this new and much improved set of auction data. Auction data on China is supplied by AMMA (Art Market Monitor of Artron) and my sincerest thanks for their continued support of this research on the Chinese auction market and to Chong Guan for his help with the data. Sincerest thanks also to the Shanghai Culture and Research Institute for their help researching the Chinese art market.

I would also like to extend a special thank you to Marek Claassen and Fergus Bremner at Artfacts.net for their help and encouragement in using their extensive and informative database on exhibitions, which has helped to deepen the analysis presented in the report.

Finally, I am very grateful to Noah Horowitz for his time and encouragement in helping to coordinate the research.

Dr Clare McAndrew
Arts Economics

Director's Foreword

Compared with other industries, the art market is famously difficult to quantify. The majority of sales are conducted privately, and discretion has traditionally been one of its underpinnings. But as the industry grows larger and more globalized, it becomes ever-more important for everyone involved to add solid data into our thinking, combining it with instinct and anecdotes in forming our views on the artworld and its potential futures.

Thus, Art Basel is proud to present this first research project with Dr Clare McAndrew, Founder of Arts Economics. Produced in collaboration with UBS, our long-term global Lead Partner, this extensive report combines survey research among premier international galleries with data drawn from a wide array of other sources. We believe that *The Art Market | 2017* paints as clear a picture as possible of the market's status quo, detailing its growing complexity, its broader trends and the challenges faced within many sectors.

In preparing the new Art Basel and UBS report, Clare has built upon her long experience and renowned methodology to analyze this complex market, while also delving even more deeply into certain key aspects of the artworld's commercial ecosystem. We hope that by sharing this granular perspective with the artworld, we may help its players to shape their strategies for growth in a volatile time. And we look forward to the engaged discussions this report will surely catalyze.

Finally, I would like to thank Clare for joining us in this ground-breaking endeavor, UBS for partnering with us on the report and enriching it with their own significant expertise, the gallerists and market professionals whose input helped shape this report, and our Director Americas, Noah Horowitz, whose PhD on the market made him an invaluable colleague for Clare in creating her premiere project with Art Basel.

Marc Spiegler
Director, Art Basel

Statement by UBS

As longstanding patrons of the arts, we are pleased to collaborate with Art Basel to publish the definitive research on the global art market. Alongside our own art services offerings, institutional patronage, and well-known art collection, the work of Dr Clare McAndrew corresponds closely with our ongoing commitment to research and analysis of financial markets and economic data for our clients.

The rapid growth in the art market over the past decade, combined with the persistence of record low interest rates in much of the developed world, has brought new attention to the economics of the market and its future development.

Yet I wonder if this view distorts the true value of what art can give us.

Even though artworks may sell for record sums, to consider art in a context of the returns it provides, we need to look at how it compares with other asset classes. Certain works may indeed have the potential for substantial value appreciation, but by its nature, art will not deliver some of the staples that I believe are crucial to a long-term investment proposition: dividends, coupons, and risk premia, and the opportunity to diversify, rebalance, and liquidate. These features are, in my view, more readily found in portfolios of more traditional financial assets such as stocks and bonds that can reliably provide income, protect purchasing power over the long term, and help build a financial legacy.

What art can give us is different, however, and in some ways is worth more. Art offers pleasure, passion, the thrill of a new perspective, and ultimately the chance to leave a legacy that goes beyond money.

Mark Haefele
Global Chief Investment Officer
UBS Wealth Management

Key Findings

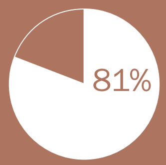
Global

$56.6 b

The global art market achieved total sales of $56.6 billion in 2016.

↓5%

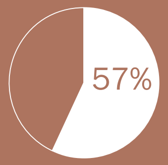
The volume of sales (number of transactions) declined by 5% year-on-year to reach 36.1 million.



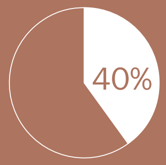
The top three markets of the US, UK and China once again cemented their dominant position in the global art market in 2016, accounting for 81% of total sales by value.

↓11%

Total sales of art and antiques in the global art market were down 11% on 2015.



The value of sales at public auctions declined 26% year-on-year, while there was a slight increase in sales in the dealer sector (of 3%). These dynamics increased the share of the dealer market to 57%.

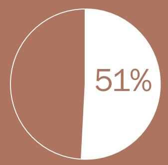


In 2016, despite a substantial decline in the market, the US was again ranked in first place for global sales by value with a market share of 40%. The UK was the second largest global market with 21%, followed by China with 20%.

Dealers

↑3%

Dealer sales rose just under 3% on aggregate to reach $32.5 billion, although performance was mixed between sectors and segments.



The gallery remained the most important channel for dealer sales in 2016, accounting for 51% of sales on average. Art fairs accounted for 41%, while online sales were 8% of the total.

↑7%

Sales for dealers with turnover of less than $1 million declined year-on-year, while those with sales between $1 million and $10 million grew by 7%. Those with turnover in excess of $10 million also showed positive results, with sales growing 2%.

$13.3 b

Sales at art fairs were estimated to have reached $13.3 billion in 2016, up 5% year-on-year and an increase of 57% since 2010.

Auction

↓26%

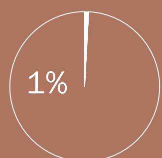
Sales at public auction of fine and decorative art and antiques came under pressure in 2016, with aggregate values falling by 26% to $22.1 billion.

↑73%

Despite its sharp decline in 2016, growth in the value of sales above $1 million has still outpaced other segments over ten years, increasing by 73% from 2006 to 2016, more than three times the rates of the low and medium segments.

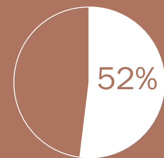
↓34%

The high end (sales above $1 million) witnessed the sharpest decline in fine art auction sales annually in 2016, falling 34% in value (versus a decline of 22% in the segment under $1 million), and it was the ultra-high end that fell the most, decreasing by 53%.

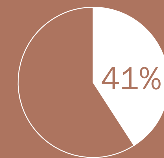


Close to half of the value of sales on the auction market came from just 1% of the artists whose work sold in 2016. Only 15% of artists had works priced in excess of $50,000, and a tiny fraction (just over 1%) had works that sold for more than $1 million.

Art Sectors



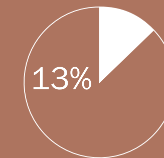
The largest sector of the fine art market in 2016 was Post War and Contemporary art, accounting for 52% of total sales by value and 37% of transactions.



Living artists accounted for 41% of the value of sales in the Post War and Contemporary sector in 2016 and half of the lots sold. Sales in this sub-sector decreased 7% year-on-year to $2.3 billion.

↓43%

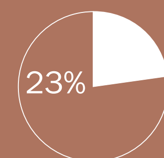
Sales of Modern art at auction fell by 43% in 2016 in value to $2.6 billion, with declines in all of the major markets, while the number of transactions decreased by 6% year-on-year.



The Old Master sector accounted for 13% of the value of the fine art auction market in 2016 and 16% of the number of transactions. European Old Masters accounted for 6% of total fine art sales values and 6% of lots sold.

↓18%

After peaking at just under $8 billion in 2014, the Post War and Contemporary sector has experienced two years of declining sales, with values falling 18% in 2016 to $5.6 billion, alongside a 12% drop in the number of transactions.



Modern art remained the second largest sector of the fine art market, accounting for 23% the value of sales and 29% by volume.

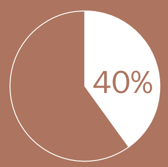
↓31%

The Impressionist and Post-Impressionist sector represented 12% of the value and 18% of the volume of the fine art auction market in 2016. Sales in this sector fell by 31% in 2016 to $1.3 billion, while the volume of lots sold increased by 13%.

↑5%

Sales in the Old Master sector increased 5% year-on-year to $1.4 billion, with the volume of lots also increasing by 12%. The European Old Master sector also saw an increase in sales of 6% to $594 million.

US HNW Collectors



A survey of US-based HNWIs by UBS and Arts Economics in 2016 revealed that 40% were active in the art and collectibles market in the last two years. 12% of US HNWIs had spent over $50,000 on art and collectibles in that period, and 3% had spent over $1 million.

1.1 m

An estimated 1.1 million US based HNWIs purchased works of art or antiques in the market in the last two years.

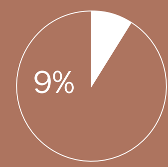
Online

$4.9 b

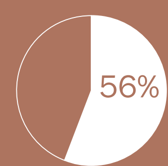
Sales of art and antiques online were estimated conservatively to have reached $4.9 billion.

↑4%

Online sales advanced 4% year-on-year, a relatively strong result in the context of the generally declining market.



Online sales accounted for almost 9% of the global art and antiques market by value in 2016.



Online sales have become an important method of reaching new customers. Over half (56%) of the online sales generated by dealers in 2016 were made to new clients that had never been to their gallery or met them in person.

Economic Impact

310 k

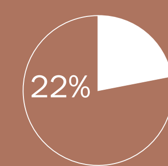
It is estimated that there were around 310,450 businesses operating in the global art, antiques and collectibles market in 2016, including 296,315 in the gallery sector and 14,135 auction houses.

3 m

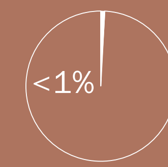
The art market directly employed an estimated 3 million people in 2016, up 5% year-on-year from 2015.

$18 b

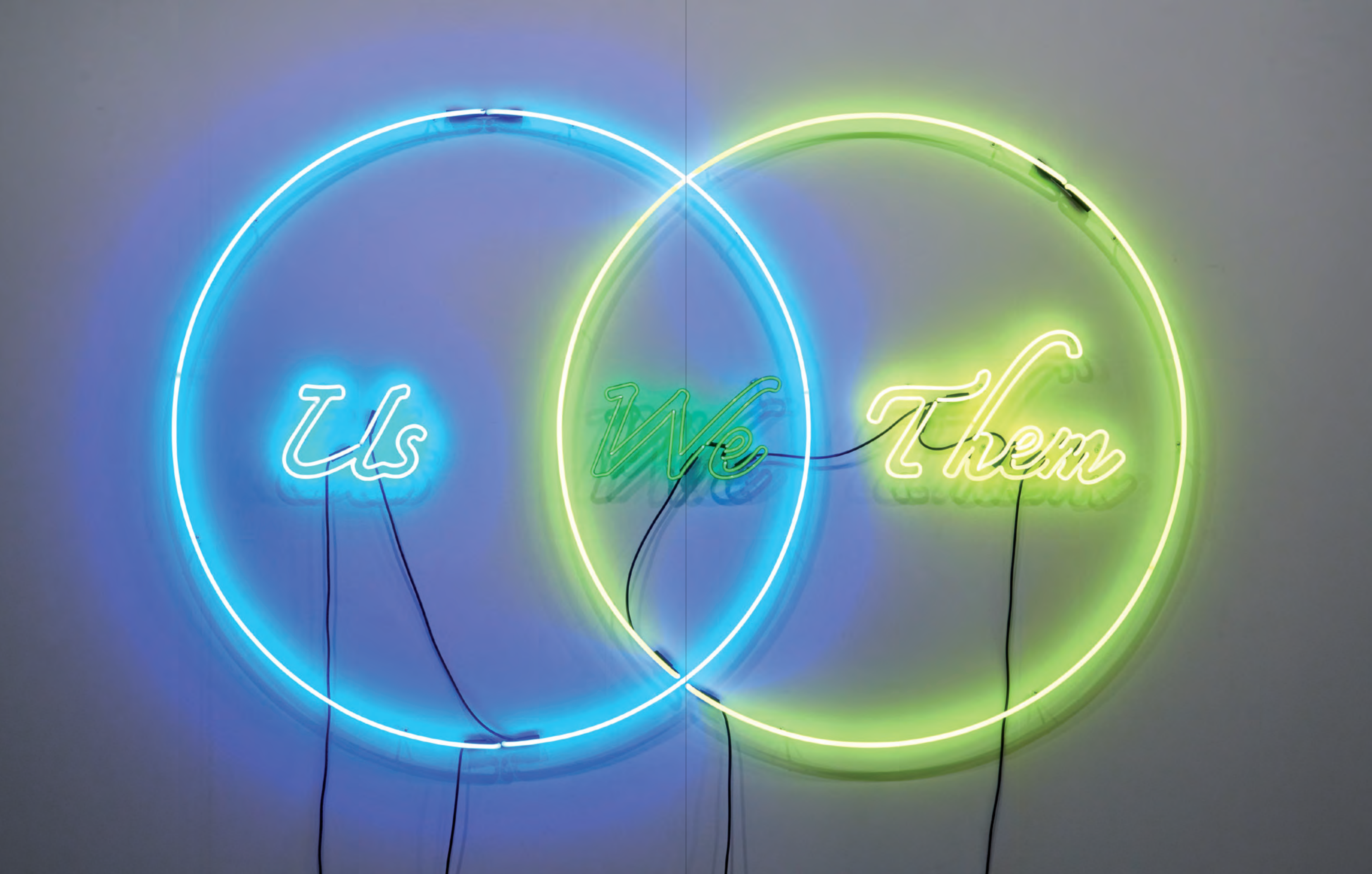
It is estimated that the global art trade spent just under $18 billion on a range of external ancillary services directly linked to their businesses, supporting a further 333,920 jobs.



The largest area of spending, although only incurred by dealers, was on art fairs, which represented 22% of the total at $4.0 billion, an advance of 6% year-on-year.



Transactions at the high end make up a tiny portion of the day-to-day activity of the market, with the sales priced at over $1 million accounting for less than 1% of auction or dealer sales in 2016. The majority of business conducted in the art market is at levels below $50,000.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We
Them

1

The Global Art Market in 2016

Key Findings

The Global Art Market in 2016

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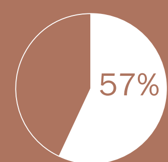

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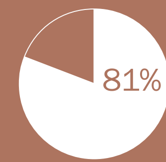


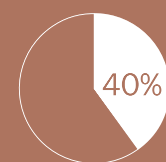
The top three markets of the US, UK and China once again cemented their dominant position in the global art market in 2016, accounting for 81% of total sales by value.

↓16%

Sales in the US dropped substantially year-on-year, by 16%, largely due to double-digit declines in the auction sector, bringing the market to $22.9 billion, 8% lower than it was ten years previously.

↓2%

China's total sales dropped 2% annually reaching a total of $11.5 billion, accounting for 20% of global sales by value and maintaining third place in the global ranks.



In 2016, despite a substantial decline in the market, the US was again ranked in first place for global sales by value with a market share of 40%. The UK was the second largest global market with 21%, followed by China with 20%.

↓12%

Sales in the UK dropped 12% year-on-year to reach $12.0 billion, although this was due in part to the decline in the Pound. The level of sales reached in the UK in 2016 was 18% lower than ten years previously.

↓10%

The EU market as a whole declined by 10% (to $19.2 billion), and its global share of value was stable at 34%, having fallen 11% since 2006.

1.1 | Overview of Global Sales

The global art market achieved total sales of $56.6 billion in 2016, down 11% on 2015. This was the second year of declining art market sales and brought total values to 17% below their recent historic peak in 2014. This decrease was due to a continued cooling of sales in certain sectors of the market and fewer high-end sales, particularly in the fine auction art market, which had bolstered the rapid expansion of values up to 2014.

Driven by both strong supply and demand, the market expanded rapidly in the first years of this century to a peak of just under $66 billion in 2007. Art sales then declined sharply in the fallout of the global financial crisis, losing 40% of their value between 2007 and 2009. Despite protracted issues and uncertainties in the wider economy, the art market's recession was short-lived and strong sales, particularly in the US and China, aided a rapid recovery. The Chinese market[1] significantly bolstered global sales, having witnessed an unprecedented boom, which pushed total aggregate values back to near pre-crisis levels by 2011. However, the Chinese market's sharp ascent also halted in 2012, leading to a net contraction in values.

In the subsequent period from 2012 to 2014, the US was a major driver of growth in the global market, being the central base for key fine art sales in the Contemporary and Modern sectors that were buoying the market once more. The market peaked in 2014 at $68.2 million, beyond the peak in 2007 and more than doubling in size within a decade. While the US managed to keep the momentum, weak sales in China and continued stagnation in Europe led to an inevitable slowdown of sales in 2015, as certain sectors cooled and it became harder for the market as a whole to keep up the pace. This negative trend continued in 2016, with a significant 11% decline and negative year-on-year performance in all of the major markets measured in US dollar terms.

Although different sectors and regions of the art market have experienced very different trajectories of growth, the performance of the art market as a whole is tied to the wider economic context, particularly factors affecting the growth and distribution of private wealth. Slowing economic growth, and continuing political uncertainty in the global economy, filtered down to the market in 2016 and was reflected in cautious buying and selling in some areas. While the market has become strongly polarized towards the top end and sales in this segment have driven rising values over the last few years, 2016 was notable for some cooling off at the very highest end of the over-heated fine art auction market, which had far fewer individual sales over the level of $10 million. The public auction sector was in fact the biggest drag on growth during the year, while the dealer market was more stable and posted modest gains.

The volume of sales (number of transactions) also declined by 5% year-on-year, the second year of negative growth, to reach 36.1 million. Again the biggest decline in volumes was in the fine art auction sector, with lots sold contracting by more than 20% worldwide. The significantly slower decline in the volume of sales than values indicates that decreasing prices in some sectors also explain the decrease in the overall value of the market.

1 The Chinese market includes sales in Mainland China and Hong Kong.

Table 1a | The Global Art Market: Value and Volume of Transactions

Year	Value ($m)	Volume (m)
2006	$54,425	32.1
2007	$65,875	49.8
2008	$62,020	43.7
2009	$39,511	31.0
2010	$57,025	35.1
2011	$64,550	36.8
2012	$56,698	35.5
2013	$63,287	36.5
2014	$68,237	38.8
2015	$63,276	38.1
2016	$56,621	36.1
Growth 2006–2016	4.0%	12.5%
Growth 2009–2016	43.3%	16.5%

© Arts Economics (2017)

The decrease in global sales was due to a continued cooling of sales in certain sectors of the market and fewer high-end sales, particularly in the fine auction art market, which had bolstered the rapid expansion of values up to 2014.

Figure 1a | **Global Art Sales by Value**

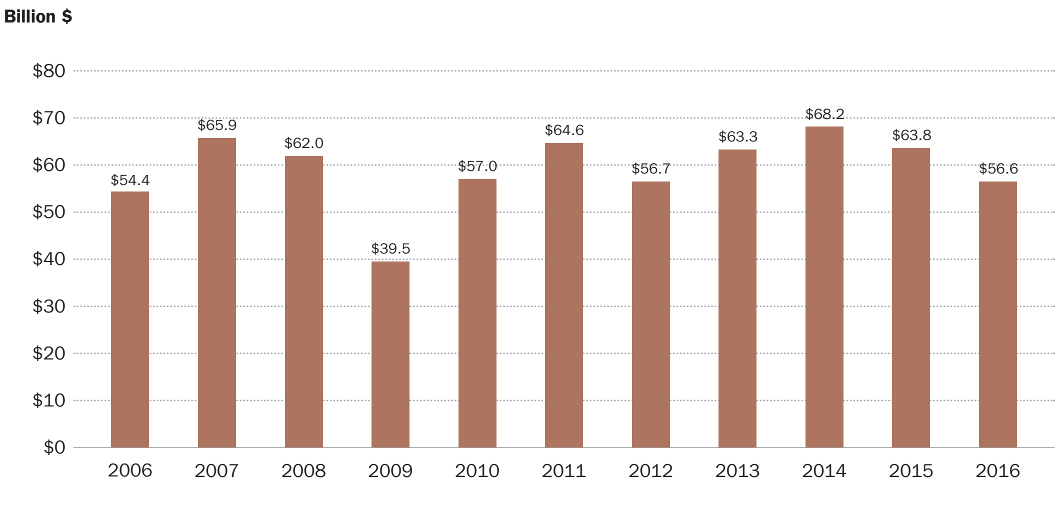
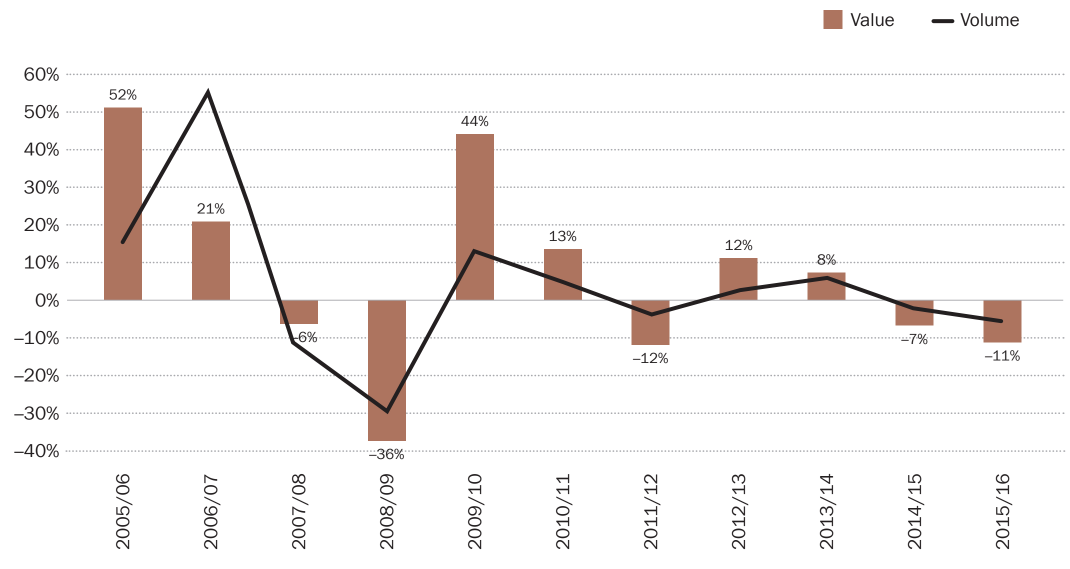


Figure 1b | **Growth in Sales on the Global Art and Antiques Market**



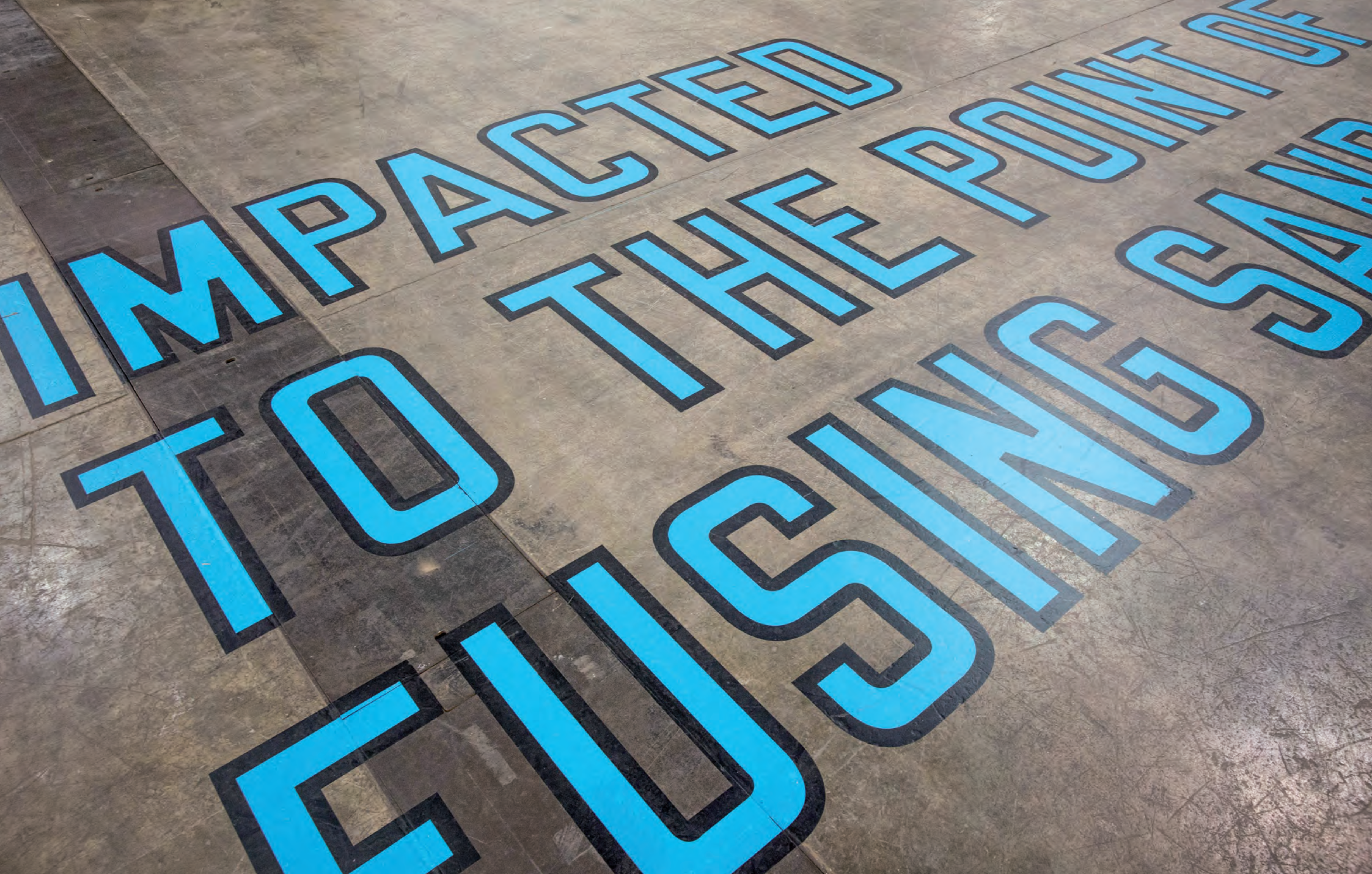

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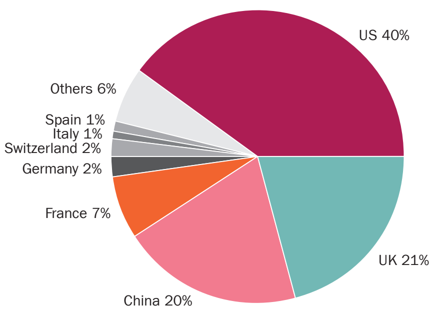
Figure 1c | Global Art Market Share by Value in 2016



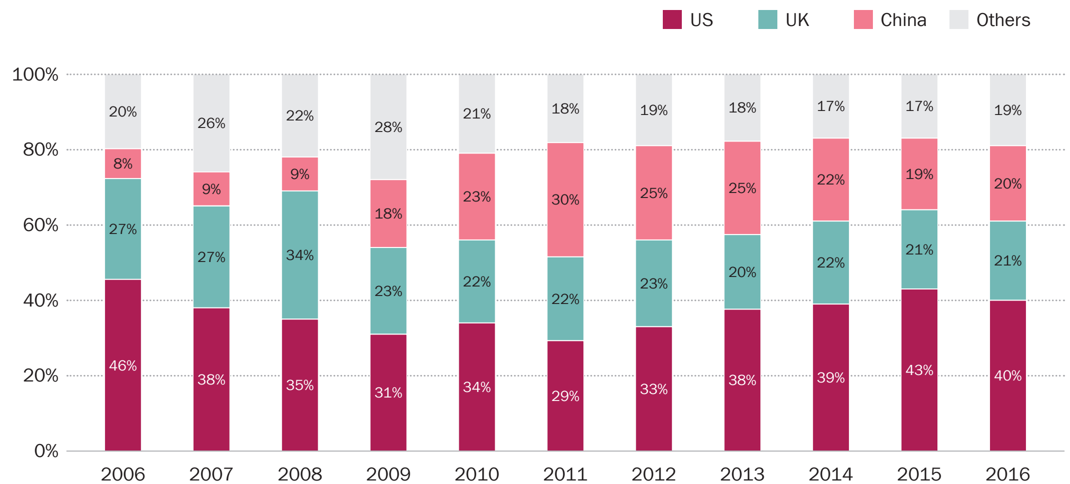
1.2 | Global Market Share

The top three markets of the US, the UK and China once again cemented their dominant position in the global art market in 2016, accounting for 81% of total sales by value.

Within this tripartite core of the market over the last ten years, the US has generally maintained premier position by a substantial margin. Its leadership was temporarily challenged by China in 2011, when the recovering US market was forced into second place as Chinese sales hit their peak. However, every other year for the last two decades, its position has been that of the largest market by value. In 2016, despite a substantial decline in the US market, it was again ranked in first place for sales by value, with a market share of 40%, down 3% year-on-year.

The top three markets of the US, the UK and China once again cemented their dominant position in the global art market in 2016, accounting for **81% of total sales by value.**

Figure 1d | Global Market Share of the US, UK and China 2006 to 2016



1.3 | Regional Sales

By 2015 the US art market had reached its highest level of share since 2006 (at 43%) as sales ran counter to the trend in most other markets and hit their highest ever level of $27.3 billion. However, in 2016 sales dropped substantially, by 16%, largely due to double-digit declines in the auction sector, with fine art auction sales dropping by over 45%.

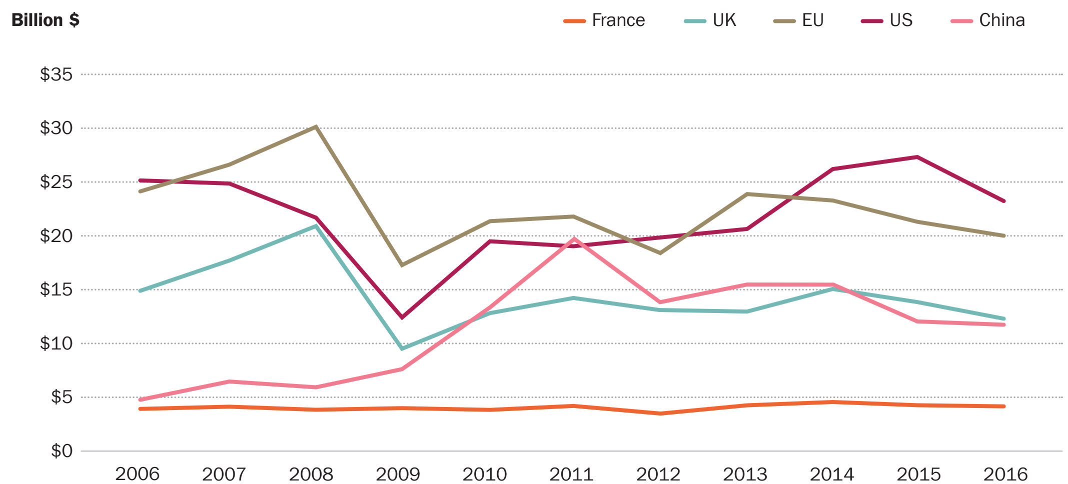
The US market was badly hit in the global recession in 2009, with sales falling more than 50% in the two years from 2007 to 2009 (to a low of $12.1 billion), a larger decrease than the EU or the market as a whole. However, it also showed one of the quickest and strongest recoveries, and had more than doubled in size again by 2015, led by strong sales in the fine art market, particularly in Contemporary and Modern art. The drop in sales in 2016 broke a four-year cycle of growth, and has returned the market's size to 2013 levels. Uncertainty, cautious buying and selling in some areas and continuing supply issues in the auction sector undoubtedly influenced sales, and the annual decline means that, despite the growth of the last few years, the market (at $22.9 billion in 2016) is now 8% lower than it was ten years previously. Views are mixed within the trade, but many feel that rather than being a sign of more protracted decline, this was to some degree a market reversion to more "normal" levels after a period of rapid escalation from 2013.

↓8%

The US market is now 8% lower than it was ten years previously. Views are mixed within the trade, but many feel that rather than being a sign of more protracted decline, this was to some degree a market reversion to more "normal" levels after a period of rapid escalation from 2013.

The UK market retained its place as the second largest market worldwide in 2016 with a share of 21%, just marginally ahead of China, which had overtaken the UK in terms of sales values for five years (from 2010 through 2014). The UK's unexpected vote in June 2016 to leave the European Union caused much speculation about the effects Brexit would have on the art market. While Article 50 will only be triggered in March 2017, the impact this might have on the art trade and on the future of European regulations and polices such as import VAT, resale royalties and other charges in the UK will take considerably longer to emerge. The main immediate effect of the vote in 2016, besides some more general increasing economic uncertainty, was a rapid weakening of the currency. After a dramatic swing to a 30-year low immediately following the vote, the Sterling to US Dollar exchange rate remained volatile during 2016, losing a total of 20% in the period from January to December 2016.[2] This deterioration potentially helped to boost international sales in the UK, with buyers from the US and elsewhere finding better value at sales at fairs and auctions in the latter half of the year. The market as a whole still dropped 12% year-on-year to reach

Figure 1e | Sales in Major Markets 2006 to 2016 (Billion US$)



2 £1 GBP measured in January 2016 was approximately $1.5 US dollars versus $1.2 at the end of December 2016.

$12.0 billion, although this was due in part to the decline in the Pound. Currencies aside, like the US, the fine art auction sector showed significantly poorer results in the UK in 2016 than the previous year.

The level of sales reached in the UK in 2016 was 18% lower than ten years previously. The growth in sales since the market's lowest point in the last decade in 2009 was also less than half of the rate of the US market (although double that of the EU).

China gained 1% in share annually, accounting for 20% of global sales by value and maintaining third place in the global ranks. China's total sales dropped 2% year-on-year reaching a total of $11.5 billion (from $11.8 billion in 2015).

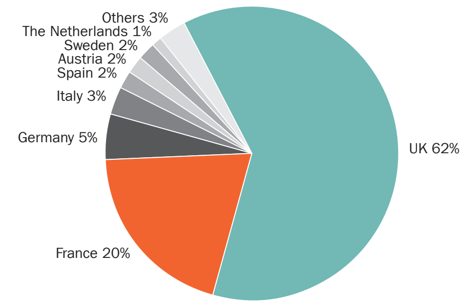
Elsewhere in Europe, performance was mixed, but most of the larger markets showed low to moderate declines in sales, which were not overly affected by currency conversions with a much more stable US dollar / Euro exchange average over the year. France was again the fourth largest market worldwide with a slight increase in share (1%) to 7%. Despite a positive year for some of the major auction houses, mixed performance elsewhere and stagnant dealer sales caused aggregate sales to fall by 3% to just over $3.9 billion. The EU market as a whole declined by 10% (to $19.2 billion), and its global share of value was stable at 34%, having fallen 11% since 2006.

Within the EU, the hierarchy of sales remained stable, and the UK was once again the largest market by a considerable margin. The UK accounted for 62% of the value of sales in the EU, France remained in second place with a 20% share and Germany was in third place with 5%. The exit of the UK from the EU would clearly affect the measurement of this market substantially: the EU market without the UK accounted for just 13% of global sales in 2016. While sales in the EU have grown 12% since the low point of 2009, measured without the UK, sales would, in fact, have fallen by 11% in the region.

While sales in the EU have grown **12%** since the low point of 2009, measured without the UK, sales would, in fact, have fallen by **11%** in the region.

Many of the nations in the EU are highly dependent on buyers and inventory from the UK as well as providing rich source markets for this leading European hub. Although the UK will have to negotiate new trade agreements with the EU, the details of which could take up to two years to be fully established, once Article 50 is triggered, there is a clear possibility of a significant deterioration in the terms of trade due to the possible introduction of tariffs on UK imports and exports. This could negatively affect the European art trade in future. Whatever is negotiated, it is most likely that the costs of trade between the UK and EU will increase, whether through market access measures (such as tariffs) or increased administrative burdens (such as custom formalities and VAT).

Figure 1f | EU Art Market Share by Value in 2016



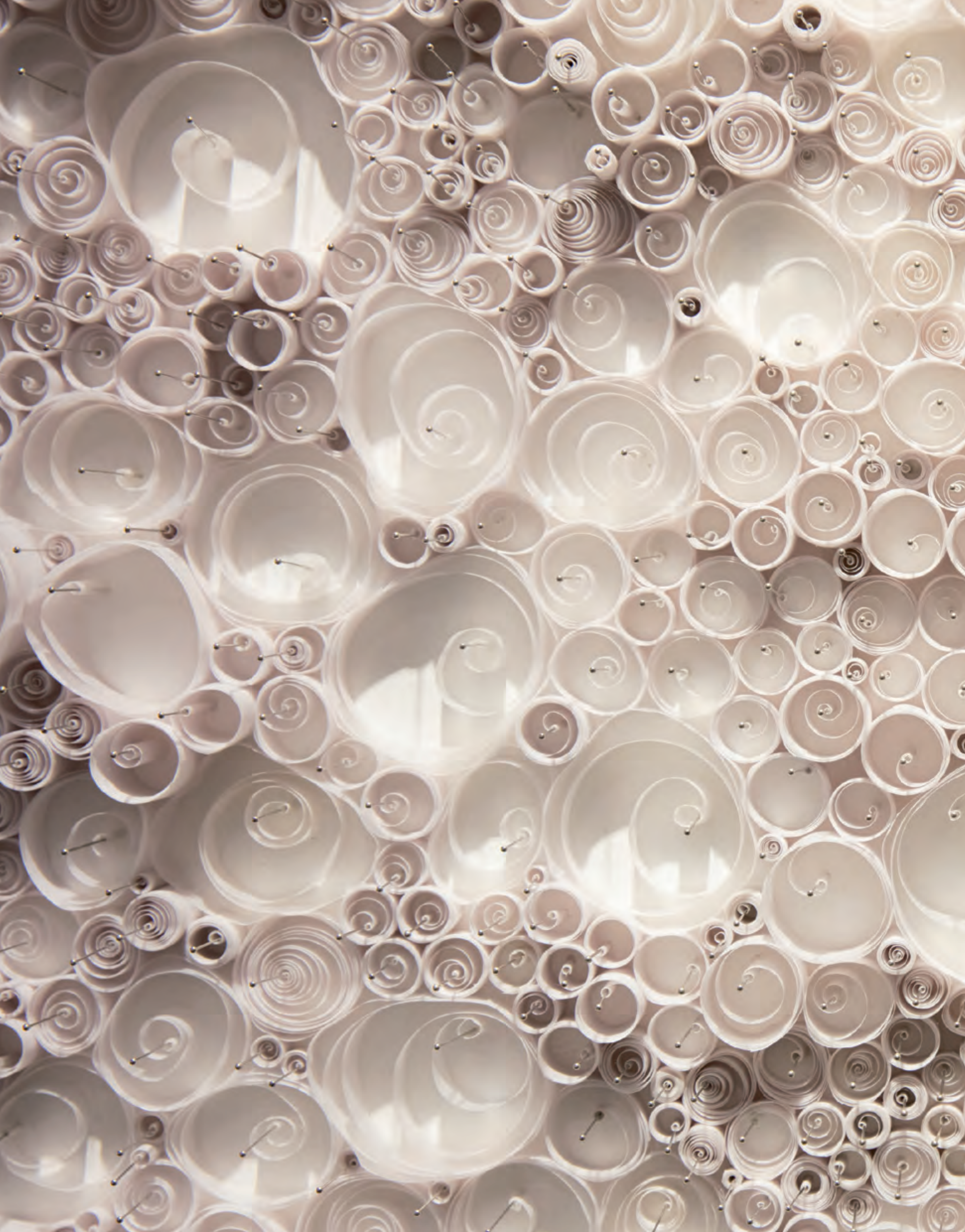
The UK market, on the other hand, may be free to improve its terms of trade with non-EU countries, which have been the dominant partners with the UK in terms of sales and cross-border trade in the last ten years. Within the EU, free trade in all goods within the internal market was a guiding principle guaranteed under Articles 9 and 30-34 EC of the Treaty Establishing the European Community (more commonly referred to as the Treaty of Rome). It was recognized however that there was a need to reconcile the free movement of goods in general with the legitimate protection of the cultural and artistic heritage of Member States. Article 36 EC therefore provides a derogation from 30-34 EC, permitting Member States to adopt or maintain prohibitions, restrictions or measures of equivalent effect on the import, export, or transit within the EU of national treasures having artistic, historic or archaeological value. This has allowed each Member State to define its own national treasures (using its own wording, categories and values), and then to adopt any measures to restrict the free flow of art objects to whatever extent they deem necessary in order to preserve the national patrimony. While most countries allow the free flow of Contemporary art, there are a broad range of definitions and inclusions in older sectors of the market, which has lead to some distortions in intra-EU trade. States have had divergent interpretations of the term 'national treasure,' which had tended to be either an 'extensive' interpretation by countries such as Italy and Greece that aim to enforce tight restrictions through broad definitions, or a more 'restrictive' interpretation by major importing countries like the UK, which are the key centers for international trade. In 2016, Germany used this derogation to enforce stricter restrictions on both internal and external trade in works of art. Under their new Cultural Property Protection Law, or Kulturgutschutzgesetz, works of art exported from Germany to destinations within the EU will require an export license if they are valued above €300,000 and are over 75 years old, while those for extra-EU export require a license if above €150,000 and over 50 years old, affecting a very broad section of the Contemporary sector and instigating concerns within the trade that this could have a negative effect on vitality of the country's art market.

These types of trade restrictions along with various other European directives such as Artists' Resale Royalties and import VAT on art have all added to the administrative costs of doing business in the EU and may now be reviewed by the UK. If these were removed, the UK could potentially become increasingly competitive, with fewer regulations and lower charges on non-EU sales. As a result, its competitive position vis-à-vis major markets such as the US and China could improve while its trading position with the EU may deteriorate.

In 2016, aggregate sales by dealers accounted for a larger share of the market at **57%** by value, with auction sales comprising **43%.**

The breakdown between public auction sales and private sales varies widely between countries and between the different sectors of the market. In 2016, aggregate sales by dealers accounted for a larger share of the market at 57% by value, with auction sales comprising 43%. It is interesting to note that this is one of the highest shares the dealer sector has reached in recent years, with the market often fluctuating around 50:50 with more marginal changes year-to-year. There was a similarly large increase in the share of the dealer sector in 2009 during the market's decline (when it reached close to 56%). Generally, in a buoyant market, auction sales tend to perform the most strongly, with sellers enticed to the public auction market as there is increased potential for upside or better than anticipated results with ample demand. However in a less certain or declining market, the risk at auction is greater, and potential for unexpected upside significantly reduced, which may tempt more vendors to pursue private sales. It seems likely that this may have been the case in 2016, particularly at the high end of the market.

Dealer sales are dealt with in detail in Chapter 2, with an analysis of the auction sector in Chapter 3.



2

Dealer Sales and Exhibitions

Key Findings

Dealer Sales and Exhibitions

$32.5 b

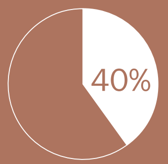
Global sales in the dealer and gallery sector reached $32.5 billion in 2016.

↑3%

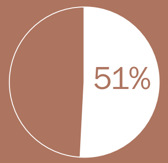
Sales in the dealer sector rose 3% on aggregate year-on-year from 2015, although performance was mixed between sectors and segments.

↑7%

Sales for dealers with turnover of less than $1 million declined year-on-year, while those with sales between $1 million and $10 million grew by 7%. Those with turnover in excess of $10 million grew 2%, including an increase of 19% for those with sales of over $50 million.



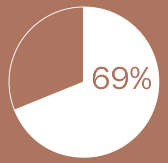
Although values are skewed towards the high end to some extent, by far the most important segment for dealer sales is the middle market (works priced between $5,000 and $50,000), which accounted for close to 40% of both the value and volume of sales in 2016.



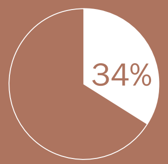
The gallery remained the most important channel for dealer sales in 2016, accounting for 51% of sales on average. Art fairs accounted for 41%, while online sales were 8% of the total.

$13.3 b

Sales at art fairs were estimated to have reached $13.3 billion in 2016, up 5% year-on-year and an increase of 57% since 2010.



Sales to private individual collectors dominated both the dealer and auction sectors in 2016. For dealers, on average, 69% of their sales in 2016 were to private collectors.



34% of sales made by dealers in 2016 were to new clients. The share of sales to new buyers declined with increasing turnover, from 42% for those with turnover less than $500,000 to 18% for those with sales in excess of $10 million.

45 k

There were 45,387 major group or solo exhibitions in 2016, up 20% in number over ten years. While more than 80% of sales were concentrated in the three largest art markets – the US, UK and China – in 2016, these markets accounted for only a 31% share of the number of global exhibitions.

296 k

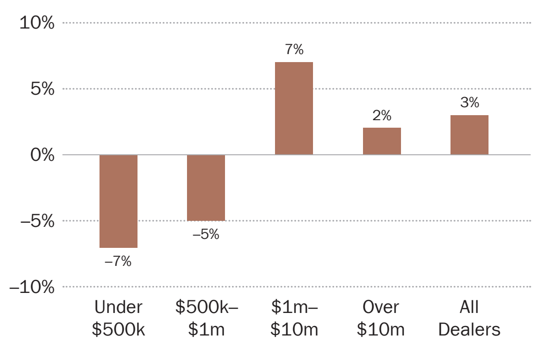
The dealer sector consisted of 296,315 businesses in 2016, with a core of around 5,000 dealers responsible for roughly 80% of total sales by value.

2.1 | Dealer Sales

The highly fragmented international gallery and dealers' market consisted of an estimated 296,315 businesses in 2016 (from a total of 310,450 businesses involved directly in buying and selling fine art, decorative art and antiques worldwide, including auction houses, galleries and dealers). However, there is a core of around 5,000 dealers who are responsible for up to 80% of total dealer sales by value.

While sales in the auction sector declined in 2016, the dealer market was much more stable on aggregate. Although performance was mixed between segments and individual businesses, dealer sales rose just under 3% on aggregate to reach $32.5 billion. This rise in sales and the sharp decline in auction values meant that the dealer market accounted for 57% of total art market sales by value in 2016. The breakdown of dealer versus auction sales has wavered around 50:50 at a global level for the last decade, and as noted in Chapter 1, the auction sector has tended to account for a greater share of sales in more buoyant markets. The breakdown also varies considerably between countries and sectors. In some emerging markets the share of dealer sales has been as low as 10%, whereas in some mature markets it has reached over 60%.

Figure 2a | Change in Turnover by Dealer Turnover Segment 2015–16



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A core of around 5,000 dealers are responsible **for up to 80%** of total dealer sales by value.

In 2016 in larger mature markets, the share was generally above 55%, while in China it remained at close to 30%.

Unlike the auction sector, there is no public source of data on dealer sales. Information on the dealer sector must be gained through surveys, interviews and secondary sources. In 2016 Arts Economics conducted its annual global survey of more than 6,500 dealers from the US, Europe, Asia, Australia, Africa and Latin America, directly and through the major dealers' associations. The survey had a response rate of 17% and presents many useful insights into the sector.

Based on the survey data, the median turnover for dealers in 2016 was stable on 2015 at $875,000. While sales across all dealers increased by close to 3% year-on-year, there were considerable differences in the performance of different segments of the market. The survey indicated that 40% of dealers had a positive year in 2016, while 60% reported declining sales. However, the net gain in value generated by the minority in the growing segment was enough to produce a positive overall result.

The survey covered dealers in a broad range of sectors, including Contemporary art, Modern, Impressionist, Old Masters, antiques, decorative arts and design. However, the majority of respondents sold Contemporary art, either solely or in combination with another sector. Many of these sectors such as Contemporary and Old Masters saw an uplift in sales on aggregate year-on-year, but these totals were strongly influenced by the performance of certain value segments, with some of the biggest uplifts across all sectors at the higher end of the market.

Figure 2b | Share of Dealers by Total Sales in 2016

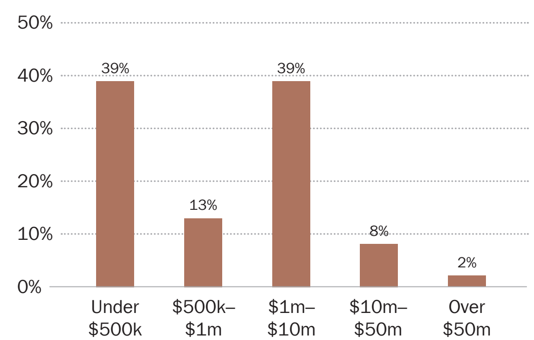

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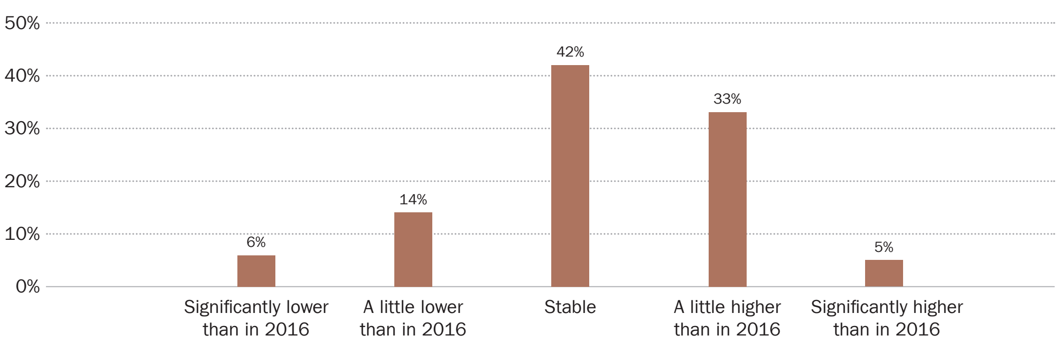
Figure 2c | **Dealers Views on Sales in 2017**



After rallying somewhat from 2014 to 2015, sales for businesses with turnovers less than $500,000 declined by 7% in 2016. Analyzing this segment further, the greatest losses were for those dealers with sales of less than $250,000, whose aggregate sales fell by 11%, compared with a slight increase in sales for dealers with a turnover of between $250,000 and $500,000.

Dealers with turnover between $500,000 and $1 million also experienced a decline in aggregate sales of 5%. Performance within this segment was mixed, however, with close to 70% of the businesses having stable or increasing sales. It was therefore the extent of the losses of the 30% of dealers with declining sales (and their relative size) that pulled the aggregate figures down.

Aggregate sales for dealers with turnover between $1 million and $10 million grew by 7%, with the majority of businesses in this segment posting stable or increased results for the year and only 11% reporting losses.

Those with turnover in excess of $10 million also showed positive results, with sales growing 2%. Within this segment there was a marked difference in performance for those with sales under and over $50 million. Sales for those with turnover between $10 million and $50 million showed a 10% annual decline, while in the segment with sales over $50 million, values advanced 19% year-on-year. These results fit with some of the anecdotal evidence from interviews with dealers and collectors that there has been strong sales for some of the largest dealers, including a small number of individual sales at very high price points.

Dealers in Latin America were among the most optimistic about future sales, with 73% predicting a better year in 2017 (including 9% forecasting a significant increase in sales). There was also optimism in the UK and the US, with 42% and 38% respectively predicting that 2017 would be a stronger year. In contrast, other European and Chinese dealers were the most pessimistic about sales prospects. Excluding China however, all other Asian dealers predicted an increase in sales.

The average number of works sold by dealers was relatively stable year-on-year at 128. As in the auction sector, average volumes are often skewed by some decorative art and antique dealers, who tend to sell a high volume of smaller items. These volumes can fluctuate significantly between sales without any significant change in the performance of an individual business. The median number of works sold in 2016 was therefore more representative at 70.

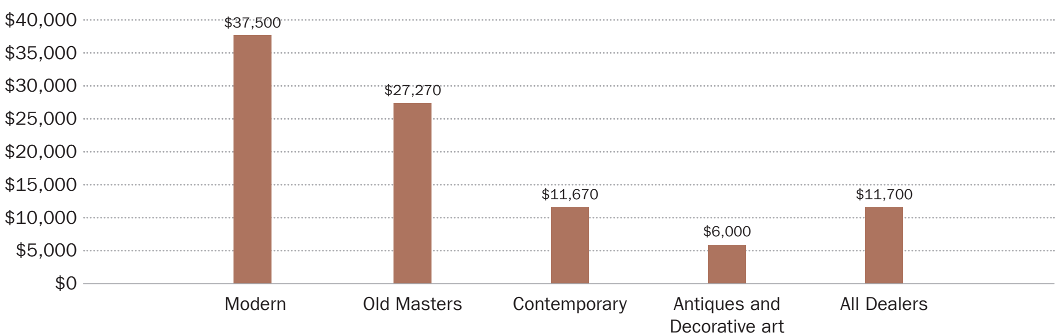
There were few significant differences between sectors with regard to the change in the volume of sales. In the Contemporary market, the drop in sales volumes of 1% alongside increasing values (up 5%) resulted in higher average prices. In the Modern sector, however, while the volume of sales dropped just 2%, the loss in sales values in the sector of 20% led to a fall in average prices of 11%.

↑7%

Aggregate sales for dealers with turnover between $1 million and $10 million grew by 7%. Those with sales exceeding $10 million also showed positive results, with sales growing 2%.


LIFE ON THE slow line
Kimetto smashes world record in Ber
RIOT POLICE PULL OUT BUT PROTESTERS ARE UNMOVED
Use of tear gas led many to join protest
Defiance draws more onto streets
Fonda's mother a victim of child sexual abuse
BACK TO BUS
Over the hedg
AUTUMN SALE
Bobby's Fashions
CUSTOM TAILORS
Chief secretary hints at poll consultation delay
Probe call over air traffic control centre sabotage
BACK TO BUSINESS
Sharing the wealth
Beijing's meeting of tycoons erodes trust
BUSINESS
PROTESTS PUT HEAT ON SHARE MARKET
Shops close early as protest hits hard
Shenguan down after trading resumes
Firms reap benefits from breaking the glass ceiling
SOHO SELLS SHANGHAI PROJECT STAKE TO CTRIP
Zoo York
Enters Chinese Market
Common human foibles that lead to investment missteps
ELL sheds some IPO gains on profit alert
Regime uncertainty posing problem to US economy
Problem of graft lies with state economy
CURRENCY CALCULATOR
CASIO
THE WORLD'S FIRST GPS HYBRID WAVE CEPTOR
GRAVITYMASTER
COMMODITIES
CURRENCIES
CAPITAL MARKETS

Figure 2d | **Median Prices by Sector in 2016**



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2.2 | Market Prices and Segmentation

Average prices can often mask a great deal of the price activity within sectors due to the wide range within and between businesses. However, the highest average prices in 2016 were found in the Contemporary and Old Master sectors and the lowest in decorative art and antiques. Prices varied by region also, with the highest in the US and some of the lowest in Europe. Although businesses did not supply data on every individual transaction carried out during the year, Figure 2d shows the median of the distribution of average prices for all businesses, based on their reported sales values and volumes. This shows that the highest median prices were in the Modern sector and lowest in antiques and decorative art.

Figure 2e | **Share of Individual Sales and Total Sales Values by Dealers in 2016 by Price Bracket**

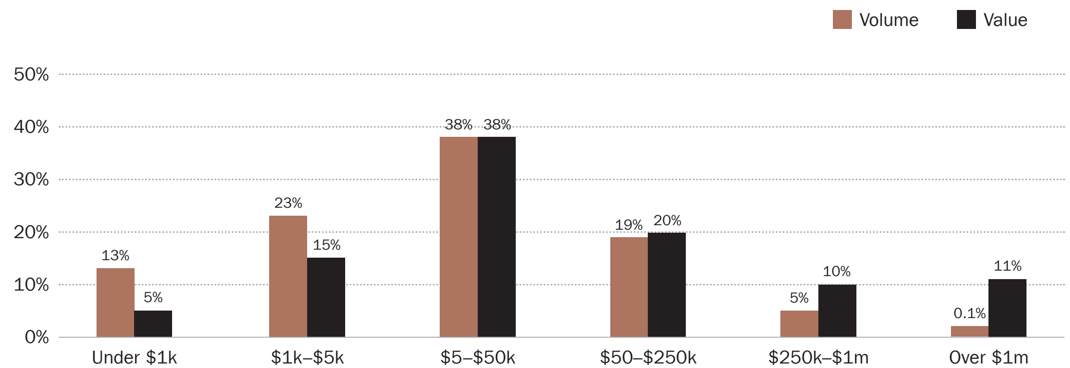

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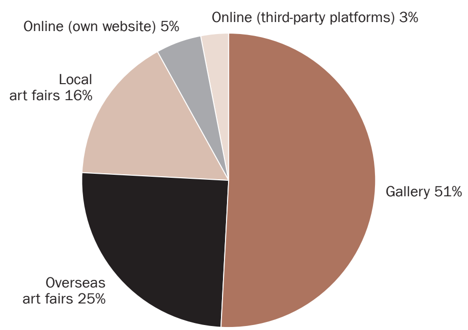
Figure 2e sets out the number of individual sales and the value of sales by dealers in different price segments. In 2016, the majority of both the value (58%) and volume (74%) of works sold in the dealer sector were priced at less than $50,000. The single largest price segment for dealers was between $5,000 and $50,000 (also the largest in 2015). Works priced at more than $1 million accounted for 2% of the volume of works sold and 11% of values. Although values are skewed towards the high end to some extent, this is a much more balanced distribution than the fine art auction sector analyzed in Chapter 3.[3] It also shows the importance of the middle market for dealers (works priced between $5,000 and $50,000), which is by far the largest segment by both value and volume of sales.

3 It is important to note that the survey includes largely mid to high level dealers only due to the sampling selection process (attendance at a major fair and memberships to dealer associations). It therefore excludes a large number of very small galleries and dealers, hence underestimating the volume of sales at the lower end.

Figure 2f | Share of Dealer Sales by Channel in 2016



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41%

Art fairs continued to be a critical part of dealers' business representing 41% of their total sales in 2016.

2.3 | Sales Channels

The gallery remained the most important sales channel for dealers in 2016, accounting for 51% of sales on average, up 3% on the share reported in 2015. The share of gallery-based sales has fallen over the last ten years as the importance of fairs and online sales has risen, but it has fluctuated both up and down over the last five years within a relatively narrow band (from a low of 43% in 2011 to its current high of 51%).

Art fairs continued to be a critical part of dealers' businesses, representing 41% of their total sales in 2016. In 2016, 43% of the dealers surveyed made half or more of their annual sales at art fairs, while 14% made over three-quarters of their turnover through these events.

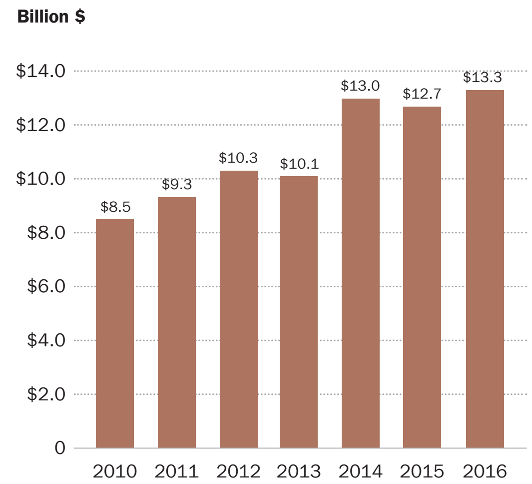
The share of sales made through overseas or international fairs represented a higher share of value (25%) than local or national fairs (16%) in 2016. The share of sales at international fairs rose 7% year-on-year as some dealers continued to pursue an international business model, consolidating their sales around key international events. Local fairs, on the other hand, fell in share by 6% year-on-year.

On average dealers attended five fairs in total in 2016, down from six in 2015. The number of local versus international events attended was fairly evenly split in 2014 and 2015. However, in 2016 dealers' attendance at local events was higher, with an average of three local fairs versus two fairs attended outside their primary country of business. Although there are likely to be differences between individual businesses, these results indicate although dealers attended less international fairs, the share of sales they generated at these events was higher.

Although few art fairs report consistent information on their total annual sales, based on the data reported by dealers on their share of turnover, sales at art fairs were estimated to reach $13.3 billion in 2016, up 5% year-on-year and an increase of 57% since 2010.

Despite cutting back on the number of events attended, sales made through art fairs advanced, suggesting improved performance at the fairs dealers attended. However, in line with rising sales, the costs to attend fairs has also escalated, increasing from $3.8 billion in 2015 to $4.0 billion in 2016[4], and suggesting that the returns, on aggregate at least, have remained stable rather than increased.

Figure 2g | Estimated Total Art Fair Sales 2010 to 2016 (Billion $)



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4 Expenditure on art fairs and in other ancillary industries is discussed in Chapter 7.

The importance of fairs varies between businesses, and dealers have also reported that it can be difficult to establish where a sale is actually made, with fairs acting as a development platform for future sales that may take place in their galleries. However, it is clear that for many dealers, fairs form a crucially important channel to make sales and nurture future transactions. Dealers have noted anecdotally that in addition to the sales finalized at fairs, they can make more than twice the amount in post-fair, follow-on sales, directly attributable to having exhibited at particular events during the year. Art fairs are not only a critical business development platform for nurturing future sales, but also facilitate the cultural exchanges and dialogues between dealers, curators, collectors, the media and others.

Online sales represented 8% of dealer sales in 2016, up 1% year-on-year. The majority of these sales (5%) were made through the dealer's own website, with the remaining 3% through third-party platforms. These sales have become an important method of reaching new customers with more than half of the online sales generated by dealers made to new clients.

2.4 | Dealer Margins

The art market, especially at the top end, can be a highly capital-intensive business with large credit requirements. However, the market remains generally bereft of trade financing. Accessing credit is one of the biggest problems for new dealers starting out, often creating an insurmountable barrier to entry versus older established dealers with good track records, credit histories and substantial inventories. More than 30% of the dealers surveyed identified financing their business as one of the top three challenges they will face over the next five years.

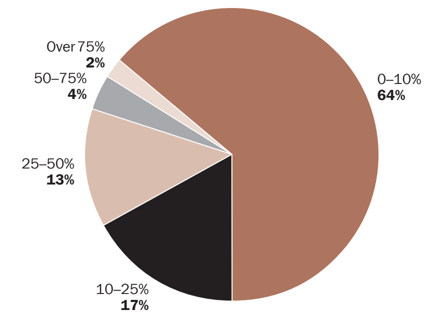
The art market, especially at the top end, can be a highly capital-intensive business with large credit requirements. However, the market remains generally bereft of trade financing.

Many dealers are self-financing and try to organize their business around selling enough inventory to finance running costs and purchases of inventory.

This was borne out in the survey results, which showed that leverage in the sector is relatively low. To assess the leverage used by dealers, respondents were asked to report their debt ratio in 2016. In this instance, the debt ratio measures a company's debt and liabilities versus its assets (sales and stock), and it can be interpreted as the proportion of the company's assets that are financed by debt, or an indicator of their financial risk. The majority of dealers (64%) had a debt ratio in 2016 of 10% or less, and only 6% had a ratio in excess of 50%.

Although there is no global standard, in the US, the current average rate of leverage (using book debt to equity measures) in the market overall is 62%, while some retail industries (such as car sales) have rates in excess of 70%. The average in general retail is around 46% and specialized retail is 42%.[5] These industry benchmarks indicate a relatively low amount of debt in the dealer sector in 2016. Nevertheless, dealers do tend to carry more leverage than second-tier auction houses. Of those businesses surveyed in the second-tier auction sector in 2016, 95% of respondents reported a debt ratio of between 0% and 10%, while the remaining 5% operated with a ratio of between 10% and 25%.[6]

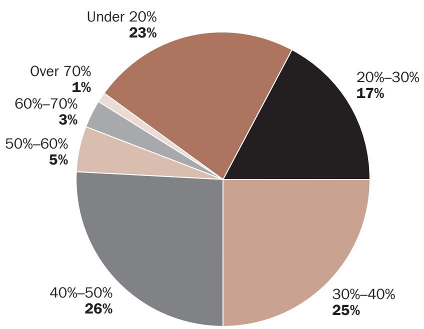
Figure 2h | Debt Ratios in the Dealer Sector in 2016



While low leverage in the dealer sector potentially shows a good deal of stability and low financial risk, these rates are unlikely to solely be the result of operational choices, as many dealers simply cannot access financial supports and have had to develop their financial business model based on a high equity/low debt approach. Although a high debt ratio implies greater financial risk

5 Data courtesy of Aswath Damodaran, Stern School of Business at New York University.
6 Around 500 nationally important second-tier auction houses were also surveyed in 2016, and the results are presented in this chapter for comparison with dealers. Chapter 3 discusses the auction sector in more detail.

Figure 2h | Dealers' Gross Profit Ratios in 2016



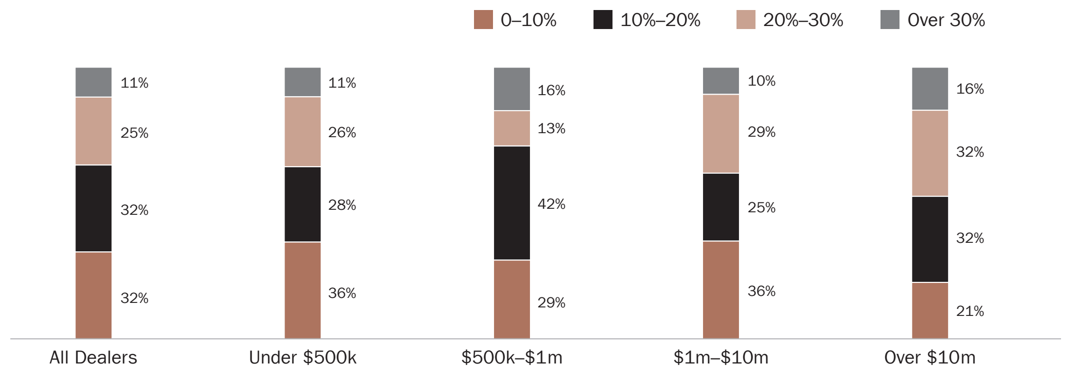
associated with the company's operations, leverage can also be an important tool that companies use to grow. Debt ratios vary widely across industries, with capital-intensive businesses able to access stable cash flows, such as utilities, having much higher debt ratios than other industries like technology. The art market has relatively volatile cash flows, which pose risks for businesses, and may require some dealers to take on debt during difficult periods. As there is very little or no inventory-based financing in most regions, those few dealers with a high debt ratio relative to their peers would probably find it expensive to borrow.

Dealers were also asked to report the profit margins of their businesses in 2016. Dealers reported their gross profit ratio, which, for the purposes of this analysis, is the ratio of sales to the cost of goods sold (also referred to as their margin on sales). The higher the percentage of gross profit, the more a company retains on each dollar of sales to service its other costs and debt obligations. Gross profit is therefore generally a measure of the profitability of sales rather than the overall profitability of the company (which is measured by its net profit).

A distinct competitive advantage of dealers is that they can set their own mark-ups and, unlike auction houses, dealers do not charge any commission or premium to the buyer and exert much more control over the price. 40% of dealers reported that their gross margins were 30% or less in 2016, while just over half were between 30% and 50%. Just 9% reported gross ratios over 50%. Gross margins vary widely between industries but using some benchmark rates at the end of 2016 in the US, the average gross profit margin in general retail was 37% (and 44% in specialized retail), 41% in capital goods industries and as high as 51% in financial services.[7] The majority of dealers therefore had

7 Data courtesy of CSI Markets.

Figure 2j | Dealers Net Profit Ratios in 2016



margins within similar ranges to specialized retailers but less than specialized service industries, with investment services and others as high as 90% (largely as they rely primarily on variable labor costs).

It is worth noting also that gross profit margins did not necessarily rise with increasing turnover. Of those dealers reporting gross margins in excess of 50%, 57% had sales of less than $500,000 in 2016, and nearly three-quarters had turnover of less than $1 million. At the higher end, 60% of dealers with turnover in excess of $10 million annually had gross profits of 30% or less (including most of those with turnover of over $50 million).

Dealers also reported their net profit ratios, which measure sales relative to all costs and expenses. This ratio more precisely defines how profitable individual companies and industries are by expressing their retained profit per dollar of sales. Again, net margins vary widely between industries but the average net profit margin in general retail in 2016 was 8% (and 10% in specialized retail), 5% in capital goods industries, 19% in financial services generally and as high as 25% in consumer financial services and 20% in investment services.[8] While nearly one-third of the sample had net profit margins of 10% or less, the majority (57%) had profit ranges between 10% and 30%, with 11% well above market benchmarks at over 30%. Net profits did not rise (or fall) in any predictable way with sales turnover, with more variation within value segments than between them. However, the two most profitable segments with the highest share of margins in excess of 30% were those dealers with turnover from $500,000 to $1 million, and those with sales over $10 million.

The results are not significantly different from the net profit margins reported by second-tier auction houses. For these companies, 30% had net margins of 0% to 10% while a further 65% reported levels of between 10% to 30%. The largest segment of responses (40%) was the level of between 20% and 30% (versus just 25% of dealers), but only 5% reported profits greater than 30% (versus 11% of dealers).

2.5 | Supply and Inventories

While demand for different categories of art and antiques rises and falls over time, supply in many sectors of the art market has diminished, and one of the biggest competitive challenges raised by dealers relates to the growing difficulties they face trying to find and source good quality art and antiques at reasonable prices. Even in the Contemporary market, which by definition has a replenishable supply of works produced by living artists, competition for certain artists remains high in some segments.

Dealers' net profits did not rise (or fall) in any predictable way with sales turnover, with more variation within value segments than between them.

8 Data courtesy of CSI Markets.

Table 2a | Sources of Supply for Dealers in 2016

	Private Collectors	Estates	Institutions/ companies	Other dealers	Auction	From artists	Other source
Antiques and decorative art	32%	10%	1%	19%	35%	1%	3%
Contemporary	15%	3%	2%	5%	6%	69%	1%
Modern	31%	16%	1%	16%	14%	20%	2%
Old Masters and Impressionist	46%	9%	0%	28%	18%	0%	0%
All Dealers	18%	5%	1%	8%	10%	57%	1%

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Sources of supply for dealers varied by sector. For Contemporary dealers, the main source of supply was works directly from artists. This accounted for 69% of their inventories (and close to 80% for those working in the primary market). For antiques and decorative art dealers, auctions were the main source for supply (35%) along with private collectors (32%). Private collectors were also the key source for older sectors of the fine art market, accounting for 46% of the value of Old Master dealers' inventories. This is similar to the sources of inventory for auctions (discussed in Chapter 3). In the second tier auction sector, private collectors accounted for 54% of the value of consignments in 2016 with a further 19% from estates. Works consigned by galleries and dealers also accounted for an average of 16% of these auction houses' inventories for sale.

While historically dealers' business models were based around finding inventory at very low prices and selling it for a substantial mark-up, in recent years many have based their competitive strategies on being able to find and access the best quality artists and works for their buyers and adding high-value services such as expertise surrounding the object, its maker, and its history, authentication and restoration. The decision to buy the object outright and sell it on or simply act as an agent to the transaction is often made on a case-by-case basis. Both sourcing and selling works now takes place on a highly competitive market, with dealers pitted against each other as well as engaged in head-to-head rivalry with auction houses in some sectors.

In the sample of dealers surveyed, respondents reported that in 2016:

- 56% of their sales came from sales of works on consignment
- 30% was from sales of inventory that they owned, and
- 14% was sales on commission or as an agent.

This varied between sectors, with sales of works from owned inventory higher for antiques and decorative art dealers (at 70%), and much lower (22%) for Contemporary dealers. In the Contemporary sector, sales on consignment dominated, accounting for 65% of sales on average.

Of those dealers making acquisitions into inventory for their businesses in 2016, the median value of purchases was $315,460 (down 4% year-on-year), which would equate to around 36% of median sales. Although there was a wide range of spending reported, including a small portion of dealers who bought more than they sold, the average share of the value of acquisitions to sales was 38%.

Dealers were asked how long it took on average to sell a work from their inventory. As in the last two years, the period between six and 12 months garnered the most responses (25%, down 6% on 2015). The second highest was those holding inventory for longer than two years (21% of respondents, an increase of 11% year-on-year). While the share of dealers with a lengthy inventory cycle increased, there were also fewer dealers with short inventory cycles of less than three months (at 7% versus 17% in 2015), suggesting possibly slower sales turnovers and lower liquidity in some areas of the market.[9]

When broken down by broad market sectors, 23% of Contemporary dealers and 32% for antique and decorative art dealers had inventory cycles of less than six months. More than half of the fine art dealers reported a cycle of more than one year, including 54% of non-Contemporary and 51% of Contemporary fine art dealers (close to double the share reported in 2015). In the decorative art and antiques sector, this share was less than half (43%).

There were no major differences in inventory cycles between dealers based on their level of turnover. Those dealers with turnover in excess of $1 million had a slightly larger share in the slower cycle (in excess of one year) at 54% versus 46% for those with turnover below $1 million.

9 Note these annual comparisons are between the dealers surveyed in 2016 and those surveyed in 2015 (and not the two year responses of the same set of dealers in 2016). While similar sampling methods were used, some changes undoubtedly may reflect changes in the respondents to the survey.

Figure 2k | Average Time Taken to Sell Works from Dealers' Inventory in 2016

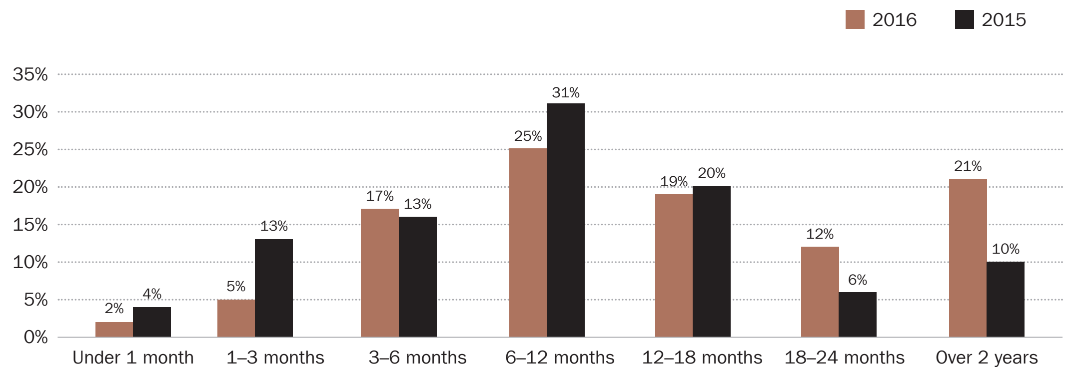
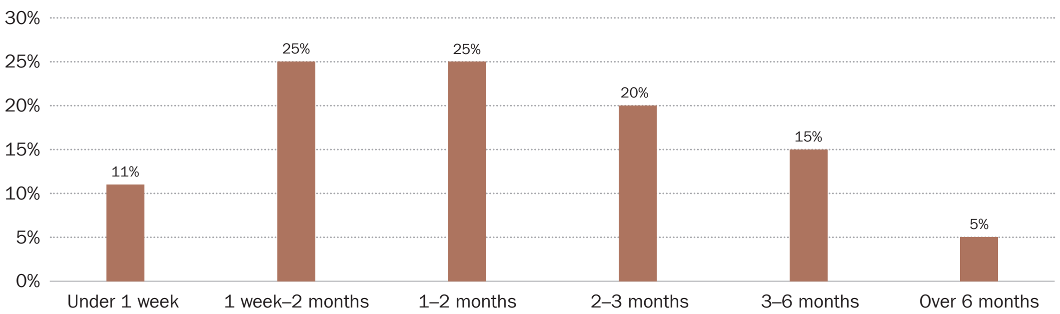


Table 2b | Average Time Taken to Sell Works from Inventory by Sector in 2016 (by Sector)

Average inventory Holding period	Antiques and decorative art	Contemporary fine art	Non-Contemporary fine art
Under 1 month	4%	2%	6%
1–3 months	7%	5%	3%
3–6 months	21%	16%	16%
6–12 months	25%	26%	19%
12–18 months	11%	22%	6%
18–24 months	14%	11%	13%
Over 2 years	18%	18%	35%

Figure 2l | Average Payment Cycle for All Dealers in 2016



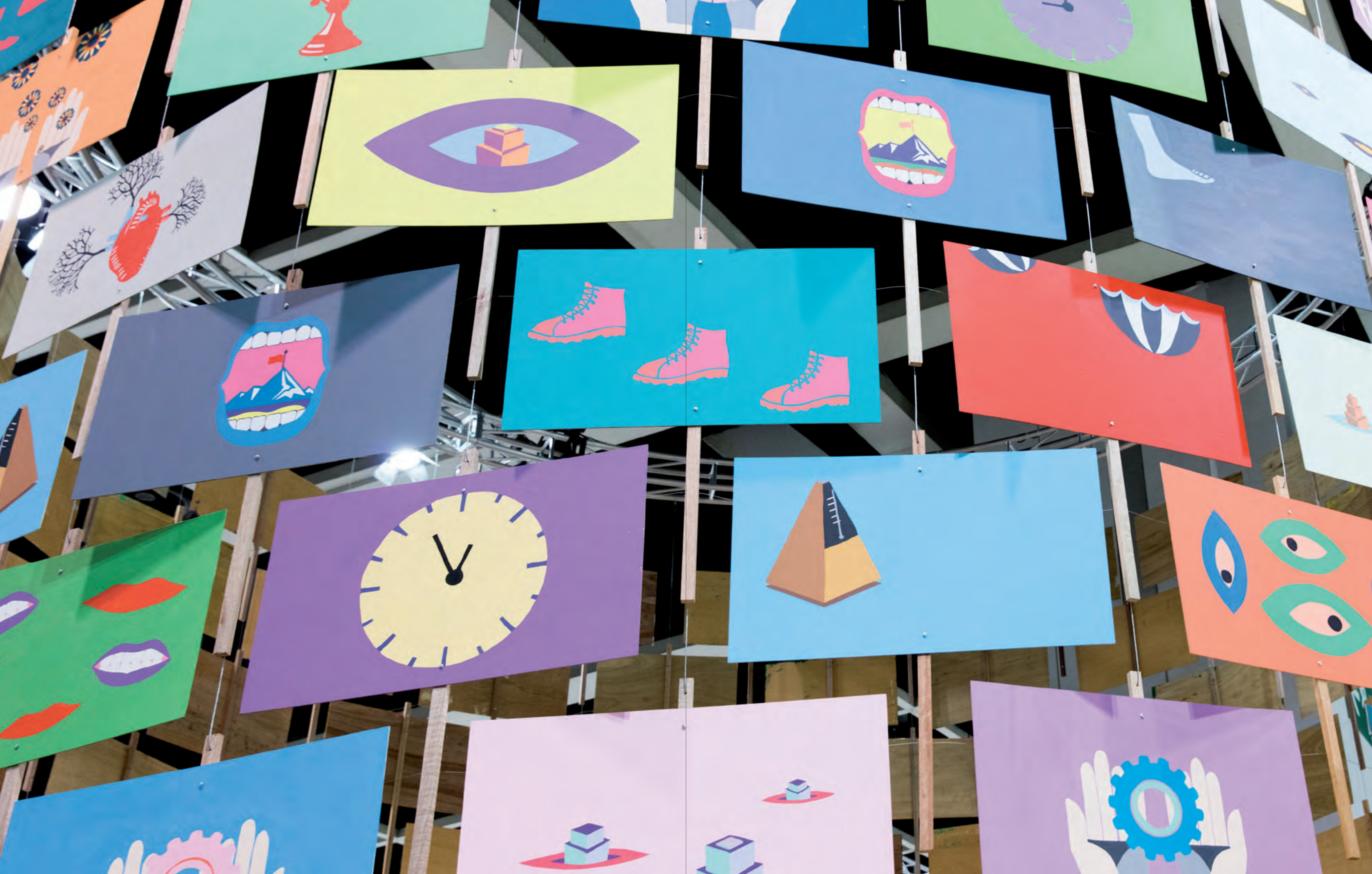
A slow-moving cycle of inventory could put dealers under considerable financial pressure, resulting in cash flow problems, exacerbated by limited access to financing.

Overall, the survey indicated that for just over half (52%) of the dealers surveyed, the average time it takes to sell works from inventories is a year or more. This very slow-moving cycle of inventory could put dealers under considerable financial pressure, resulting in cash flow problems, exacerbated by limited access to financing as noted above. Dealing with the banking sector continued to be an important issue raised by dealers, particularly in areas such as inventory financing and lending.

This slow inventory cycle can be compounded by a slow payment cycle post-purchase, with 20% of respondents reporting that it took them more than three months from when an item was purchased to final settlement (versus only 3% in the second-tier auction sector). However, the majority of dealers (61%) were paid within two months on average (versus 80% in the auction sector).

Unlike general retailing, some luxury retailers do extend flexible terms and financing to regular purchasers or to entice new ones, and terms of 30 to 60 days are not uncommon for specialized services. When asked about the channels they purchase through, many collectors cited a key advantage of purchasing through a dealer was the ability to negotiate over prices and terms. Collectors noted that dealers often offer flexibility in terms of payments over an extended period, along with option to resell and swap items with them in future.

The existence of payment terms beyond 60 days, which was the average for at least 40% of dealers, does indicate that dealers offer (or are forced to accept) terms that would be considered beyond the normal scope of business in many other similar industries.



2.6 | Art Buyers

Art collectors are a disparate group, representing individuals and institutions from a very broad range of goals, backgrounds and regions. While surveys of collectors provide some insights into a particular regional or other specific group, some useful general information can be obtained from the surveys of the dealers (and auction companies) that they buy from in the art market.

In 2016, according to the survey, dealers reported that on average their sales were made to 75 buyers. This average is down 14% on results in 2015, but the median was stable at 40.

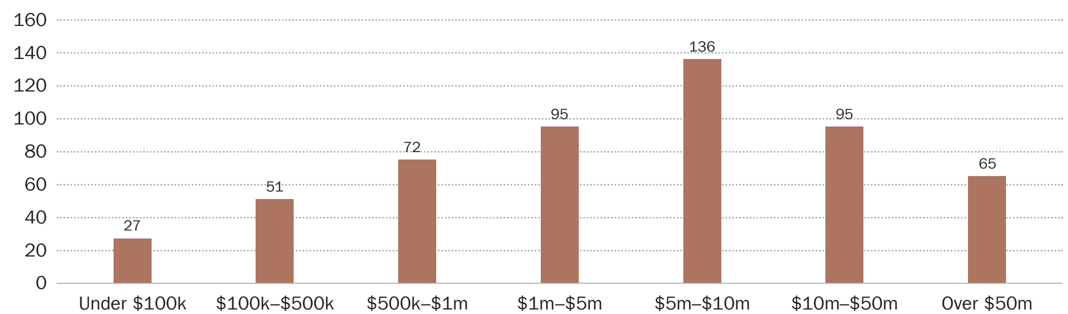
In contrast, the major premier-tier auction houses all deal with thousands of multi-national buyers. Survey results for the second-tier houses showed that their average number of buyers in 2016 was also much higher than dealers at 2,295 (with a median of 600). This was stable on similar surveys of this sector in 2015, and up by more than a third on the numbers reported in 2014.

While the number of buyers at auction houses tended to rise in tandem with their turnover, this was only the case up to a certain point for dealers, and those dealers with the highest turnovers tended to deal with fewer clients than mid-level dealers. This is because dealers at the top end, particularly in the fine arts, tend to sell a smaller number of higher value works each year. Figure 2m shows that the number of buyers that dealers sold to rose with increasing turnover, but then declined after turnover reached a very high level. According to the survey results, this turnaround occurred at the level of $10 million in sales, a pattern that was observed in 2015, and again fitting with the anecdotal evidence that dealers at the very high end often deal with a narrower group of clients.

Dealers reported that their sales in 2016 were relatively well spread between new and older clients. On average, 34% of their sales were to new clients buying from them for the first time in 2016 (stable on 2015), 40% were buyers that they had dealt with for between one and five years, which was also the biggest segment in 2015, and 26% longer-term buyers of over five years, down 1% year-on-year.

The share of sales to new buyers was also more important to dealers with lower turnovers than those at the highest end. For dealers grossing up to $1 million, new buyers accounted for a higher than average 42% of sales. However, this dropped to 21% for dealers with turnover in excess of $10 million and again to 18% for those with a turnover greater than $50 million. Although the importance of longer-term buyers grew as turnover rose, at the very highest level, medium-term buyers of one to five years were by far the most important segment.

Figure 2m | Average Number of Buyers by Dealers Sales Turnover in 2016



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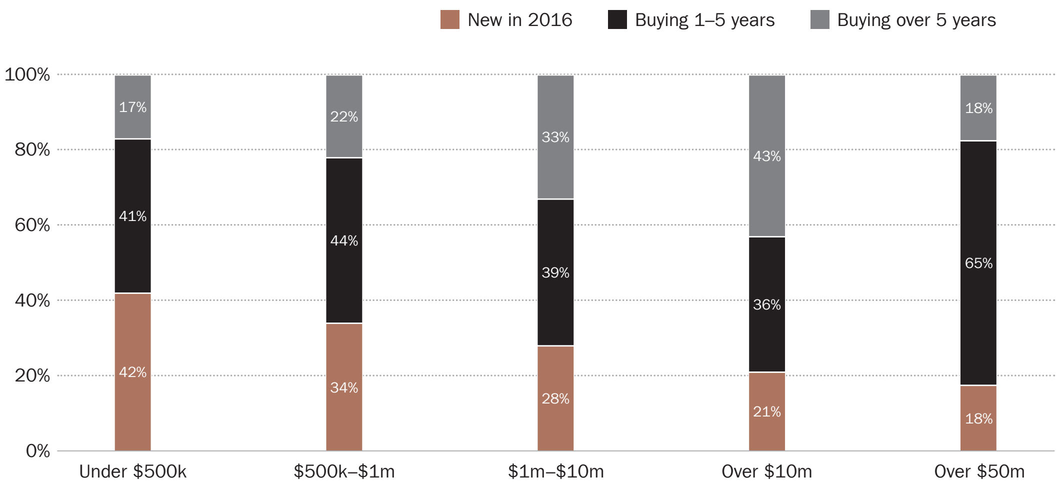
The share of new buyers differed slightly between sectors, with the highest share reported by Contemporary and antiques dealers, both with 34%. Old Master dealers, on the other hand, had the highest share of longer-term buyers (50%), while dealers in Modern sector had the highest share of medium-term buyers of one to five years (42%).

In contrast, the second-tier auction houses had significantly fewer new buyers, with those buying from them for the first time in 2016 accounting for just 18%, compared with 27% in 2015. The largest segment of buyers was again those who had been buying for one to five years at 40%, while those buying for five years or more expanded to 44%, up 11 percentage points in share year-on-year.

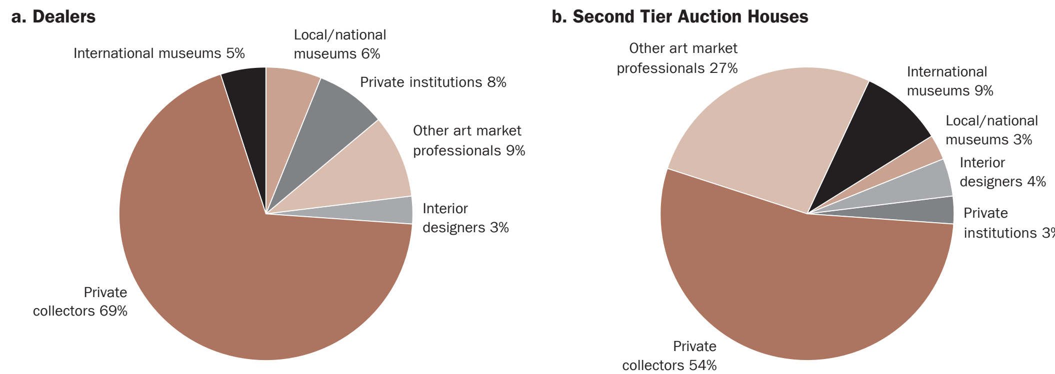
Sales to private individual collectors dominated the dealer (and auction) sectors in 2016, as they have in previous years. For dealers, on average,

Figure 2n | **Share of Dealers' Buyers by Purchase History and Turnover Level**



Sales to private individual collectors dominated the dealer (and auction) sectors in 2016, as they have in previous years. For dealers, on average, 69% of their sales in 2016 were to private collectors.

Figure 2o | **Market Share of Sales by Buyer Group in 2016**



69% of their sales in 2016 were to private collectors and, including interior designers, this increased to 72%, and the same average reported in 2015 for sales to private individuals. Sales to other members of the art trade accounted for the second highest share at 9% (down 4% in share year-on-year), while sales to private institutions such as corporations and foundations rose slightly to 8%. Sales to museums also rose 2% to reach 11% in 2016, with a slightly larger share (55% by value) to local and national institutions.

Sales to private individuals also dominated for second-tier auction houses, accounting for 54% of their sales in 2016. When interior designers are included, this figure rose to 58%, versus a total of 64% reported to all private individuals in 2015. Art market professionals were a relatively more important segment for auction houses than dealers, accounting for 27% in 2016, the same as 2015. The share of sales to museums was more on par with dealers at 12% (three times the share in 2015) but, unlike dealers, a greater share (75% of these by value) was to international museums.

2.7 | Local versus International Buyers

Sales to local buyers made up the majority of the business conducted by dealers in 2016, accounting for 61% of sales versus 39% to overseas buyers. This was the same as the average share reported in 2015, but it has declined over the last five years from a high of 72% in 2010, as dealers increasingly have pursued more internationally focused business models to reach a geographically diverse base of buyers.

The share of local versus international buyers varied with turnover levels, with the tendency for dealers with lower turnovers to have a greater share of local buyers. As seen in Table 2c however, when turnover reached over $50 million, local buyers again reverted to a very high share of 80%. This likely reflects the importance of the US buyers as a base for high-end dealers, many of which are also based in the US.

There were also important regional differences. In smaller markets in Europe, local buyers dominated, however their share tended to be less in larger markets, at 56% in France and 50% in the UK. In the US, 78% of sales were to local buyers, again reflecting the importance of US-based buyers in the art market, and their share was also high in China (68%) and Brazil (75%), potentially emphasizing the importance of local HNW buyers in supporting these domestic art markets.

61%

Sales to local buyers made up the majority of the business conducted by dealers in 2016, accounting for 61% of sales versus 39% to overseas buyers.

Local buyers were also reported to account for the majority of sales by second-tier houses at 68%, although this was less than reported in previous years (averaging 78% in 2015). With a few important exceptions, local buyers tend to be important at all levels for this sector, although they accounted for a slightly larger share for auction houses with turnover lower than $1 million (at 81%) versus those with sales in excess of $1 million (at 64%). There was similar regional differences also, with US companies having a greater share of local buyers (75%) than those in Europe (64%).

Table 2c | Share of Dealers' Local versus International Buyers in 2016

Turnover level	Local Buyers	International Buyers
All dealers	61%	39%
Under $500,000	70%	30%
$500,000–$1m	54%	46%
$1m–$10m	52%	48%
$10m–$50m	40%	60%
Over $50m	80%	20%

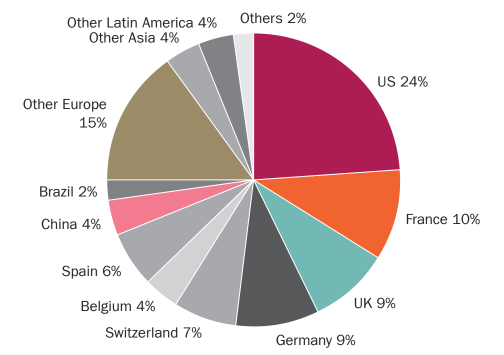
The largest top-tier houses have multi-national operations, with buyers spread between the US, Europe, Asia and elsewhere. While US buyers tended to represent a slightly larger share on average in 2016, their margin has decreased over the last ten years, particularly with the increased importance of Asian buyers. In 2016 surveys of the top-tier houses showed that on average US buyers accounted for close to one-third of sales, with just less than 30% from Europe. Chinese buyers accounted for close to one-quarter of total sales, and Asian buyers (including Chinese, Indian and other Asian buyers) were on a par with Europe at 30%. Russian and Middle Eastern buyers averaged around 2% each.

Dealers reported a geographically diverse range of buyers. European and US buyers dominated the sample, with a share of 59% and 24% respectively. The nationality of buyers varied depending on the location and nature of the respondent's business, and many dealers in Europe or Asia transacted more with buyers in neighboring countries. As in previous years, businesses with lower turnovers traded more locally, as shipping costs and other expenses may have proved an obstacle to wider global reach.

However, historical, cultural and political ties also play an important role. Dealers from Spain, for example, have mostly European buyers, but also a large number from South and Central America. Dealers in China transacted mainly with Chinese, Singaporean, Korean and other Asian buyers, but there was also a strong representation of collectors from Switzerland, France and Germany (as well as the US), with some galleries being partly or wholly owned and run by European dealers in China for many years.

Overall, regardless of where the dealer was based, the majority (69%) cited US buyers as among their top three most important buyer nationalities (up from 59% of the sample in 2015). The next most cited were French, German and British at around 25% each.

Figure 2p | **Most Important Nationalities of Buyers for Dealers in 2016**



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When asked to name their top three challenges over the next five years, the biggest challenge cited by dealers was to find new clients (the most commonly cited by 59% of respondents). The difficulty in finding new buyers for both auction houses and dealers is exacerbated by the fact that many collectors, particularly those newer to the market, are seeking works from a relatively narrow group of artists, which has served to boost the turnover of a small number of specialist galleries and salesrooms, but increases the challenge for others.

While US buyers tended to represent a slightly larger share on average in 2016, their margin has decreased over the last ten years, particularly with the **increased importance of Asian buyers.**

2.8 | Primary Versus Secondary Market Dealers

An important structural feature of the dealer market is that it is made up of the primary and secondary markets, with the latter dominating the trade in terms of value, and where higher prices are generally achieved. While many galleries work exclusively in one or other market, others also operate in both simultaneously.

The primary market is where artists first sell new work through dealers.[10] Works sold in the primary market are made up of new and unknown artists as well as more established contemporary artists. Some segments of this market are made up of artists that may not be very established, or the quality of their work is less easy to discern, meaning buyers are faced with a lack of full information and purchasing can entail a significant degree of risk. Dealers therefore play a crucial role in this market as a conduit for information for buyers on artists and their work. They also play a key role in many artists' careers, both directly selling their work, and promoting and developing their careers over time. Dealers are often responsible for establishing the initial price levels for an artist's works, and once a defined price base has been established, they can use increases in supply to help broaden the market and increase liquidity.

The much larger secondary market is where dealers (and auction houses) offer works of art for subsequent resale. One of the distinctive features of the art market is the predominance of trade on this secondary market, with by far the bulk of trading taking place here between former and future consumers. In the primary market, prices tend to be lower than on the secondary market, as when an artist first sells a work it can take considerable time before it is recognized for its artistic value, rarity or historical importance. By the time a work is resold, these second sales tend to be higher priced by nature. Information costs are also lower on the secondary market and participants are also likely to have more and better information concerning artists and their works, making purchases less risky.

The fall in risk is connected to the distinct feature of the value of works of art to appreciate rather than depreciate over time. This is quite different from other goods commonly traded on secondary markets, with an example being the largest secondary market, the market for used cars. Buyers in the second-hand car market generally purchase cautiously and reluctantly, hence the price gap between the primary and secondary markets tends to significantly favor the former. Art collectors, on the other hand, may often initially be more wary and pay less for very new or emerging artists' works, whose value may not be as well established as older more renowned works sold on secondary markets.

Excluding decorative art and antiques dealers, the sample of dealers surveyed was made up of dealers working solely in the primary market, those working solely in the secondary market and those working in both markets. Each segment was asked a series of questions concerning the artists they represented in 2016 to assess some key differences between them.

Most primary market dealers (83%) were optimistic that sales going forward in 2017 would be **stable or higher** than in 2016.

Primary Market Dealers

Dealers working exclusively in the primary market had a lower median level of sales in 2016 than the aggregate sector, at $625,000, stable year-on-year from 2015. Most primary market dealers (83%) were optimistic that sales going forward in 2017 would be stable or higher than in 2016.

The channels used for making sales were not markedly different than other dealers, although there was a slightly higher proportion of gallery sales (54%) and at fairs (43%) and fewer online (3%). On average galleries attended six fairs per year (split evenly between local and international events) and held nine exhibitions (seven in their own gallery, one in another premises within their main country of business and one overseas).

On average, primary market dealers represented 21 artists in 2016, although this ranged from under five to 100. Local or national artists tended to be more important to dealers' businesses, both in terms of the number of artists they represented and the sales they generated[11]. In 2016, 57% (or 12) of the artists represented by dealers in this sector were local or national artists, and these artists generated 60% of the galleries' sales. The remaining 43% (or nine artists) were foreign or international artists, who accounted for 40%

10 It also refers to sales of works directly from artists to collectors, without an intermediary, which are important, particularly in some regions, but difficult to estimate and not covered in the remit of this report.

11 Local or national artists refers to those artists from or working in the region or country where the dealer's business is based or reporting from.

of total sales. These artists came from a variety of different nations, but overall the most popular foreign artists, regardless of the location of the gallery, were American, British, German and French.

Dealers in the primary market often work closely with the artists that they represent, but while exclusivity was common in the past, many now actively promote their artists working with other galleries in order to nurture and develop their careers. Primary market dealers had exclusive representation with just 40% of their artists on average. Anecdotally, most dealers that maintained an exclusive relationship with an artist tended to do so locally within a city or nationally. There was a larger share of local artists exclusively represented (at 47%) versus international artists (at 29%). The share of sales accounted for by those represented exclusively was slightly lower at 47%, with 53% from artists that were also working with other galleries.

Overall, the single largest segment for sales for primary market galleries was local, exclusively represented artists (at 33% of sales).

Secondary Market Dealers
Dealers working exclusively in the secondary market had significantly higher median sales in 2016, at $3 million and this increased 20% from 2015 to 2016. Looking ahead to 2017, 43% of the dealers in this segment felt that their sales would improve, 36% predicted they would remain stable and the remaining 21% predicted a decline.

↑20%

Dealers working exclusively in the secondary market had **significantly higher median sales** in 2016, at $3 million and this increased 20% from 2015 to 2016.

Fairs were the most important channel for sales in this sector, accounting for 54% of sales on average, while gallery sales accounted for 41%. Online sales were also slightly lower than the aggregate at 5%. Dealers in this segment attended six fairs per year on average, the majority of which were local or national fairs, and held four exhibitions, with three of these in their own gallery and one elsewhere.

On average, secondary market dealers sold or were active in the markets of the work of 32 artists in 2016, although this ranged from five to 100. These galleries tended to represent slightly more local artists than foreign, with 56% (or 18) of their artists from the city or country where the gallery was primarily based. These local artists accounted for just under half (49%) of the galleries' sales on average in 2016. The remaining 44% (or 14 artists) were international artists, accounting for 51% of total sales. These artists came from a variety of different nations, but overall the most popular foreign artists, regardless of the location of the gallery, were the same as the primary market: US, British, German and French.

Exclusivity with artists was much lower in this sector than in the primary market, with dealers having exclusive representation with only 12% of their artists on average. There was again a slightly larger share of local artists exclusively represented (at 13%) versus international artists (at 9%). Non-exclusive artists accounted for the majority of sales by value (at 74%), and the single largest segment for sales in this sector was international artists, not exclusively represented by the gallery (at 41%).

Primary and Secondary Market Dealers
The final category of dealers in the fine art market was those who worked both in the primary and secondary market. This group of dealers reported that, on average in 2016, their sales were fairly evenly split between primary sales (51%) and secondary re-sales (49%). Dealers operating in both markets represented nearly 40% of the sample of fine art dealers, and operated from a variety of different segments and business models, indicative of the continuing hybridization of the sector. Although businesses varied, some dealers commented that they tended to mainly do secondary market sales for those artists they had originally represented in the primary market, while others had quite separate programs in each market. Some specialized in resale but allocated part of their business to selling works by young emerging artists to boosts margins and provide additional income. Others were younger dealers who had started in the primary market but were moving more into secondary sales to add context and help anchor their programs.

Dealers in this segment also had higher median sales than the wider group at $2.5 million in 2016, which was stable year-on-year. Views on 2017 were mixed: 36% of the group thought their sales would remain stable, 35% predicted an increase and the remaining 29% a decline.

The share of sales made through different channels by this segment of dealers was more or less on a par with the aggregate sample, with 51% via the gallery, 43% at art fairs and 7% online. On average, dealers in this segment attended five fairs per year, the majority of which (three) were international fairs. They held eight exhibitions, six in their own galleries, one overseas and one in another premises within their main country of business.

Dealers working across both markets tended to represent a higher number of artists on average, at 52 in 2016. This was split between 40% in the primary market and 60% in the secondary market.

Just over half of the artists that dealers worked with in this sector were local or national artists. In the primary market, 57% (or 12 out of the 21) of artists represented by the galleries in 2016 were local, and these artists accounted for just under half (49%) of their primary market sales. In the secondary market the share of local artists represented was similar at 56%, but these artists generated just 45% of gallery sales on average, with international artists accounting for 55%.

In the primary market, galleries exclusively represented 37% of their artists, and these artists generated 44% of their primary market sales in 2016. In the secondary market, this was even lower: just 19% of artists were exclusively represented and they generated just 22% of sales, with the remaining 78% from artists that were also represented elsewhere.

Overall, therefore, the majority of sales across the primary and secondary markets for these galleries were international artists (53%) and artists who did not have exclusive representation with the gallery (67%). The biggest generators of sales in each market individually were also foreign artists without exclusive representation.

Dealers working across both markets tended to represent a higher number of artists on average, split between 40% in the primary market and 60% in the secondary market.

2.9 | Exhibitions

Despite the growing importance of the online channel, exhibitions are a critical part of the gallery model, providing the fundamental interface between art and ideas and the public. They provide a means to contextualize and display art that makes it relevant and accessible to audiences and potential buyers and they remain the key medium through which most art becomes known. The survey indicated that on average dealers held eight exhibitions each year, six in their own premises, one in another premises in their main country of business and one overseas. The fact that one third of their exhibitions take place outside their primary businesses underlines the more proactive and externally focused nature of many businesses in the sector in seeking new buyers versus older models reliant on local interest and foot traffic. These averages include all respondents, including those who held no exhibitions overseas. Including only those who held at least one overseas exhibition, the average was two.

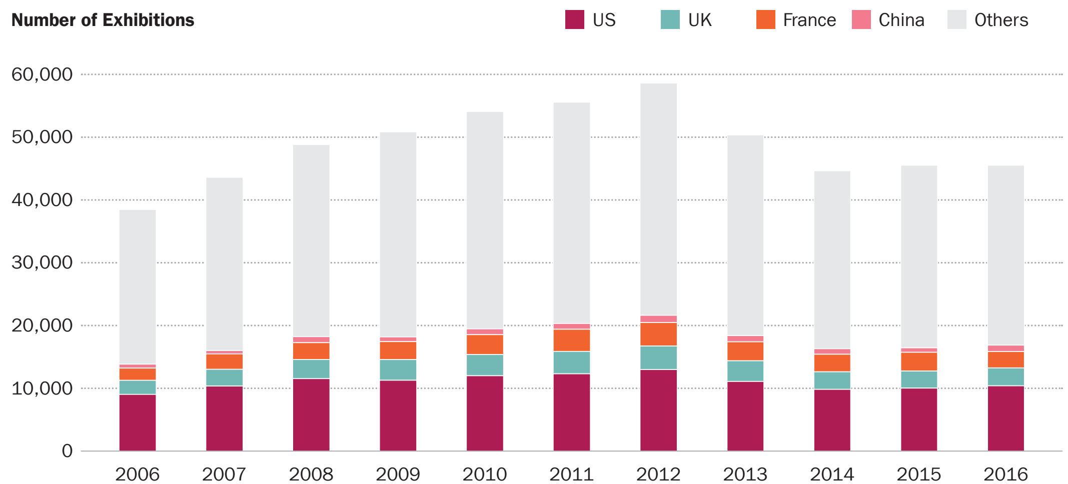
↑20%

The number of exhibitions reached around 45,387 in 2016. In the ten-year period from 2006 to 2016, the number of exhibitions has increased by close to 20%.

While the popularity of artists is often judged by the total sales they generate in a given year, the number of exhibitions they are included in also indicates much regarding their importance and popularity. Data on exhibitions in galleries and other institutions therefore offers some interesting insights into the structure of the art market.

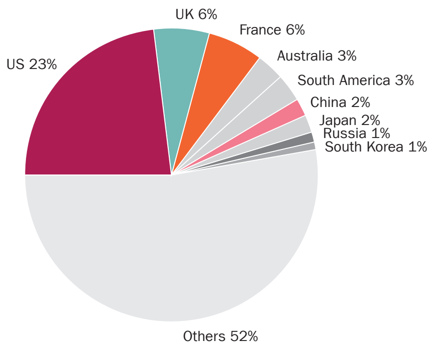
Artfacts.net is the largest global database of exhibition data with information on close to 600,000 artists gathered for over 15 years (details on their database are given in the Appendix). Using their data on major solo and group exhibitions, the number of exhibitions reached around 45,387 in 2016, 70% of which were solo shows and 30% group shows. In the ten-year period from 2006 to 2016, the number of exhibitions has increased by close to 20%.
The number of exhibitions rose steadily from 2006 (at 38,250) to a peak of around 58,375 in 2012, an increase of 53% in the six-year period. During this period, the impact of the global financial crisis on art market sales was severe and negative, but this did not appear to affect the number of

Figure 2q | Number of Solo and Group Exhibitions Worldwide 2006 to 2016



Exhibitions are a critical part of the gallery model, **providing the fundamental interface** between art and ideas and the public.

Figure 2r | **Geographical Distribution of Exhibitions in 2016**



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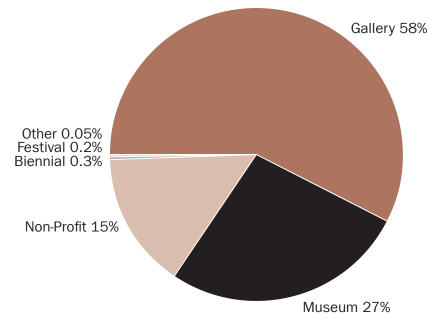
exhibitions, which edged up 4% in 2009. However, the number of exhibitions fell in 2013 and 2014, dropping by 24% in number (to 44,665), and they have not grown significantly since that point. While it is not possible to pinpoint the reasons for the decline on a global level, contributing factors could include the decline in gallery exhibition programming in favor of fairs, as well as reduced museum funding in some regions in the last five years.

While the US is the largest individual country for exhibitions (maintaining a steady share of between 22% and 24% of the total over the last ten years), some of the biggest increases have been in newer markets. China has seen the number of exhibition double in ten years, although they still only represent a relatively small 2% of the global total.

While the majority of sales values are heavily dominated in the key art market hubs of the US, UK and China (accounting for over 80% of sales), these represent only a 31% share of exhibitions around the world. Exhibitions are much more globally dispersed, with Asia, South America and other regions all important centers in this sector.

The gallery is still the primary institution for exhibitions worldwide, accounting for 58% of the number of global exhibitions in 2016, followed by museums at 27%. While most institutions have

Figure 2s | **Share of Exhibitions by Institution Type 2016**



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increased the number of exhibitions over time, in the decade from 2006 to 2016, the number of exhibitions at biennales and museums has declined. (This fall in the number of exhibitions is despite an increase in the number of museums holding exhibitions by 5% in the same period.) Excluding fairs, which are not included in this analysis of exhibitions by institution, the biggest increases, on the other hand, have been festivals and non-profit institutions and foundations.

Art fairs

The rise in the number and importance of art fairs has been one of the most significant trends in the art market in recent history. While the first major events date back to the founding of Art Cologne in 1967, followed by Art Basel and several other international fairs in the 1970s, the rise in the number of fairs in recent years has made them a central part of many dealers' businesses, allowing substantially increased access to global buyers and sales.

The number of major art fairs tracked by Artfacts.net has more than doubled in the ten years from 2006 to 2016, reaching a high of over 230 events (from 108 in 2006). Looking only at major fairs tracked by Artfacts.net with a minimum of 20 exhibiting galleries (which totaled 154 events in 2016), the numbers have also increased by a substantial 71% in ten years. The number of fairs grew from 2006 to 2008 but then fell for two consecutive years, and growth has been somewhat uneven since. The highest number of events in any given year was recorded in 2015, while 2016 showed a decrease in number by 9%.

It is interesting to note that the number of galleries exhibiting at major events has grown at a slower rate over ten years, with an increase of 56% in the ten years to 2016 to a total of just over 10,910.

The number of galleries exhibiting at major fairs rose 54% between 2006 and 2008, but then declined by 12% in the following two years, possibly in response to cost pressures in the fallout from the global financial crisis. Since then, exhibitor numbers have been unsteady and declined 9% in 2016.

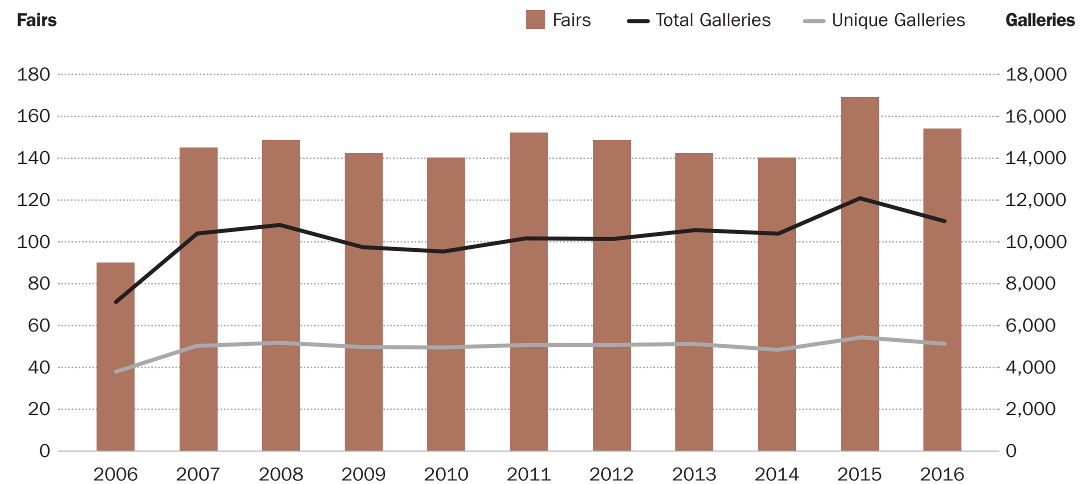
While some fairs have actively sought to reduce the numbers of exhibitors so as to ensure high quality, reducing exhibitor numbers also fits with the anecdotal evidence from dealers who have reported reducing the number of fairs at which they exhibit, focusing only on the key events that provide the most return on their investment, rather than trying to attend a wide, globally diverse selection of events.

Figure 2t tracks the aggregated number of galleries exhibiting at major art fairs as well as the number of unique galleries that exhibited at these fairs, with the latter counting a gallery only once even if it exhibited at several fairs. Unsurprisingly the number of unique galleries in 2016 (at 5,105) is much smaller than the total galleries (10,910). The number of unique exhibitors has also grown much slower over the period, by just 38% over ten years. Tracking unique galleries shows that in the years from 2008 to 2010, the apparent 12% fall in the total number of exhibitors was less about a drop in the number of unique exhibitors (which fell by only 5%) but largely due to the remaining galleries exhibiting less.

Similarly in 2015, the large jump of 17% in the number of galleries can be broken down into more galleries (35% of the increase) and existing galleries exhibiting more (65% of the increase). In 2016 a similar picture emerges in that the overall decline in numbers of 9% was mainly from existing galleries scaling back somewhat (74% of the decline, versus 26% accounted for by the drop in unique galleries). This fits with the anecdotal evidence from many dealers who have reported reducing the number of fairs attended in an attempt to curtail costs and focus on the events delivering the best returns for their businesses.

The US has been one of the top locations for major fairs in the last ten years, with a share of between 23% and 30% of the total number since 2006. However, the number of events in China and other regions has more than doubled during the period. The galleries exhibiting at these fairs are geographically diverse, but US galleries make up the largest single national group, with a share of 23% (from 21% in 2016). Chinese galleries still represent a very small share of 2%, although this has doubled since 2006, while galleries from other major markets such as the UK and France have

Figure 2t | Number of Major Fairs* and Number of Exhibiting Galleries



© Arts Economics and Artfacts.net (2017) | *Only major fairs with over 20 exhibitors

In 2016 the overall **decline of 9%** in numbers of galleries exhibiting at fairs was mainly from existing galleries scaling back somewhat (74% of the decline, versus 26% accounted for by the drop in the number of unique galleries).

Table 2d | **Top Art Fair Cities in 2016 (Number of Major Fairs)**

	2016	2012	2006
New York	14	11	12
London	12	10	6
Miami	11	13	7
Paris	7	12	5
Basel	7	4	4
Madrid	5	5	3
Amsterdam	5	4	1
Hong Kong	3	2	—
Brussels	3	2	1
Mexico City	3	1	1

been stable, collectively accounting for around 17% of exhibitors in 2016.

The top cities for hosting the major art fairs tracked by Artfacts.net in 2016 were New York, London, Miami, Paris and Basel. These have not changed significantly over the last ten years and, while most centers have increased the number of fairs since 2006, some (such as Paris and Miami) have seen a decrease in the number of events in the last four years.

Exhibition Content

It is also interesting to look at the artists that have featured in exhibitions over time across all institutions. Chapter 5 reports some of the exhibition data by sector, but the most notable feature in a more broad review of the top artists based on exhibition criteria over all sectors in the last ten years is the lack of variation over time. Andy Warhol has been the highest ranking artist in every one of the last ten years, followed by Pablo Picasso. The top five artists have also not changed in any year for the last ten years.

In 2016 there were only four artists who were not in top 20 list in 2006. These were Rosemarie Trockel, Erwin Wurm, Francis Alys and Man Ray, all of who were in the top 20 in 2015. This lack of variation does indicate to some extent that, like sales, there is a focus on a narrowly defined group of artists for some of the major exhibitions. However, the key difference is that the number of exhibitions of the top 20 artists only represent 5% or less of the total number of solo exhibitions worldwide in any given year from 2006 to 2016. This is in contrast to the market where the top 20 artists at auction accounted for a 21% share of fine art sales at auction (and a 46% share in 2015). (A detailed explanation of the criteria used by Artfacts.net for ranking artists based on their exhibition histories is given in the Appendix.)

Table 2e | **Top 20 Artists By Exhibition Rank (Number of Solo Shows)**

2006	No.	2010	No.	2016	No.
Andy Warhol	189	Andy Warhol	225	Andy Warhol	183
Pablo Picasso	171	Pablo Picasso	163	Pablo Picasso	125
Bruce Nauman	76	Bruce Nauman	91	Bruce Nauman	56
Gerhard Richter	68	Joseph Beuys	108	Gerhard Richter	84
Joseph Beuys	88	Gerhard Richter	77	Joseph Beuys	95
Sol LeWitt	58	Ed Ruscha	86	Cindy Sherman	56
Cindy Sherman	74	Sol LeWitt	88	John Baldessari	57
Ed Ruscha	64	Cindy Sherman	71	Sol LeWitt	87
Robert Rauschenberg	74	John Baldessari	82	Ed Ruscha	62
Louise Bourgeois	52	Robert Rauschenberg	59	Lawrence Weiner	53
Sigmar Polke	52	Lawrence Weiner	74	Robert Rauschenberg	83
Martin Kippenberger	43	Louise Bourgeois	70	Sigmar Polke	60
Lawrence Weiner	59	Thomas Ruff	78	Thomas Ruff	69
John Baldessari	65	William Kentridge	68	Georg Baselitz	71
William Kentridge	50	Georg Baselitz	54	Louise Bourgeois	56
Thomas Ruff	58	Dan Graham	50	Rosemarie Trockel	51
Roy Lichtenstein	69	Olafur Eliasson	45	Erwin Wurm	47
Georg Baselitz	56	Sigmar Polke	44	Francis Alys	33
Douglas Gordon	45	Fischli & Weiss	43	Man Ray	62
Olafur Eliasson	45	Martin Kippenberger	35	William Kentridge	30
Total Top 20	**1456**	**Total Top 20**	**1611**	**Total Top 20**	**1420**

Looking at the nationalities of artists exhibited around the world, there is a geographically diverse mix, with US artists accounting for 12% of all artists exhibited in 2016, French and British artists 4% each and Chinese artists just 2%. None of these shares have changed in any substantial way over the ten years from 2006 to 2016. However, the share of artists exhibited outside of their own country has shown some fluctuations. In 2006, 65% of the exhibitions of US artists were in the US, but this decreased to 60% by 2016. 39% of the exhibitions of Chinese artists around the world were in China in 2006, but this had grown to 55% in 2016. The data shows that there is also a strong national bias for exhibitions, with the largest share of exhibitions, by a considerable margin, for any nationality of artist being in their home market.

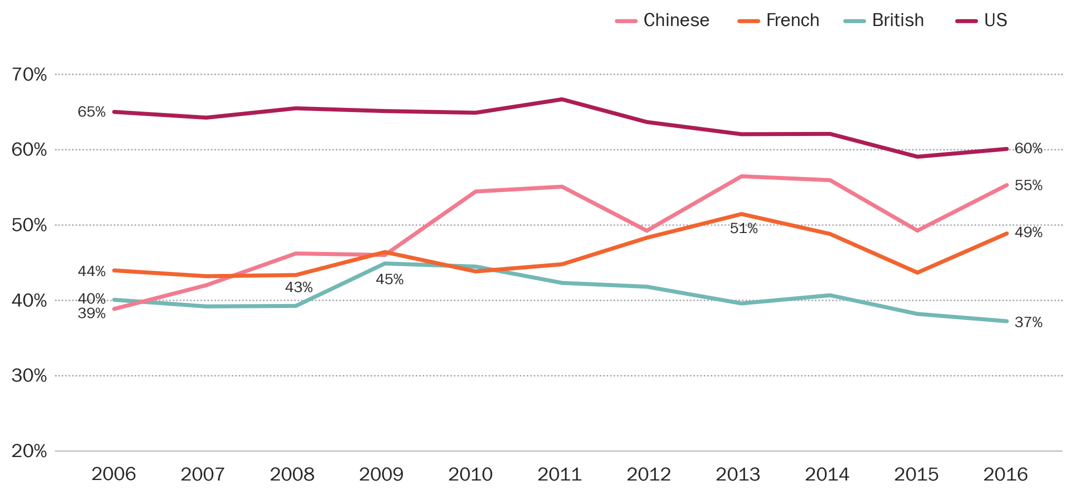
Exhibitions and the art market are strongly linked. Throughout history, exhibitions have been critical in creating the market for new art, through establishing the reputation of an artist and therefore also their prices. Exhibition histories are also key inputs in art appraisals for established artists and, as a general rule, those works that have been exhibited, particularly in certain types of shows, will be more expensive. However, this is often because their higher quality allowed them to have been accepted for exhibition, rather than because the process of exhibiting has itself driven up value. Also for specific artists, if a work has been hidden from the market and public view for a long time, its being offered for sale can spark great publicity and enthusiasm, which can also drive up prices.

Most empirical studies have indicated that there is a positive link between exhibitions and prices in the art market.[12] Some have shown that if an artist's work is displayed in an historic art exhibition in a given year, paintings dated from that year attain higher prices at auction. This has been attributed both to the fact that those participating in shows were already acknowledged as superior value artists and also that participants in exhibitions benefit from a long-lasting career boost from the participation itself. Whatever the mechanism, participation in an art exhibition can act as a strong quality signal for art buyers.

The more obvious relationship between the size and type of exhibition and subsequent market prices has been well established, with artists taking part in large museum shows correlated to higher auction prices for example. More recent studies have also looked further at the content of exhibitions, showing for example, that exhibitions which made the biggest departure from current artistic trends or the contemporary state of the

12 See Christiane Hellmanzik (2016) "Historic Art Exhibitions and Modern-Day Auction Results." Research in Economics. Volume 70, Issue 3: 421–439.

Figure 2u | Share of Exhibitions of Artists in their Home Market



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There is a strong national bias for exhibitions, with the largest share of exhibitions, by a considerable margin, for any nationality of artist being in their home market.

arts led to the greatest premia subsequently in the market for the artists, hinting at the importance of current innovativeness in future art prices and more generally at the value of looking at exhibition data in assessing future trajectories.

2.10 | Outlook

Dealers make their living by coordinating supply and demand in the art market, where the lack of transparency and importance of expertise means the value placed on information is at a premium. Knowledge and expertise are therefore key for competitive advantage and successful art dealers have both specialist knowledge combined with business acumen. Due to their specialized nature, the business model for individual dealerships is often highly dependent on the success of a small number of disciplines, and hence subject at times to considerable risks, in contrast to the more diversified sales of their auction house counterparts. However, dealers also possess a number of distinct competitive advantages that have helped them to survive over time, from the mark-ups they charge, their specialist knowledge of an artist or sector and strong vertical integration in a defined niche, to the control over a sale and their ability to maintain confidentiality on all transaction details, including the price.

Although on aggregate, indications are that sales were positive for dealers in 2016, the sector faces a number of challenges. Many of the dealers interviewed discussed their concerns that segments of businesses within the sector have come under increasing pressure in recent years, as sales and buying interest has become more centered on high-end galleries with more established artists. Many smaller galleries have come under increasing financial pressure due to rising costs and overheads, through rents, attendance at fairs and other business expenses. In the primary market in particular, dealers noted that younger galleries often do not grow with the artists that they work with or share their successes as their careers develop.

Smaller galleries have come under increasing pressure, as sales and buying interest has become **more centered on high-end galleries** with more established artists.

Some noted that these galleries provide a crucial role in establishing an artist and acting as an incubator for their early careers, but once successful, they are often cherry picked by larger galleries. The smaller galleries have therefore essentially done the difficult and costly task of launching an artist into the market, without getting to enjoy the financial benefits of their success.

Dealers, even at the highest end, recognized this could potentially be a major problem in the infrastructure of the market going forward, where these smaller galleries play a crucial role. Others pointed out that the threat to the infrastructure goes even further back, arising from the lack of support for artists themselves, including housing and other financial supports to help them even get to the gallery stage.

Dealers were asked to report the three biggest challenges they faced over the next five years. The biggest issues appeared to be related to the demand side of the market. The most frequently cited challenge was finding new buyers (70% of respondents, and also the highest rated in 2015), while 62% of the sample also reported that the economic outlook and its effects on the demand for art and antiques would be one of the biggest issues they faced (the second highest also in 2015).

Table 2f | Top Three Challenges in Next Five Years

Challenge	Share of Respondents
Finding new clients	70%
The economy/the demand for art and antiques	62%
Participation at fairs	36%
Financing your business/debt	31%
Accessing supply of objects, works of art, artists	30%
The increased regulation of the art market and cross-border trade	26%
Political instabilities	26%
Competition with auction houses	23%
Premises for your business: gallery, shop, storage	20%
Internet and online sales	15%
Currency issues and exchange rate fluctuations	7%

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Auction Sales

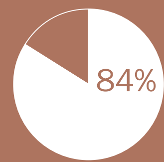
3

Key Findings

Auction Sales

$22.1 b

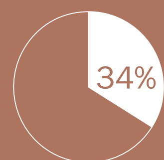
Sales at public auction of fine and decorative art and antiques reached $22.1 billion in 2016.



The three major markets – the US, UK and China – accounted for a joint share of 84% of total auction sales in 2016.

↓26%

Sales in the global auction market came under pressure in 2016, with aggregate values falling 26% year-on-year.



Due to the fall in US auction sales and relatively stable performance at the high end in China, Chinese auction sales exceeded the US market, giving China the leading market share in this sector with 34% by value versus 32% in the US.

↑6%

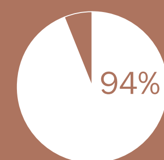
The uncertainty prevalent in the market was evident, with the rate of buy-ins rising six percentage points year-on-year in 2016 to 33%.

↓34%

The high end (sales above $1 million) witnessed the sharpest decline in 2016, falling 34% in value (versus a decline of 22% in the segment under $1 million), and it was the ultra-high end that fell the most, decreasing by 53%.

↑78%

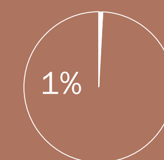
Within the high-end segment, ultra-high-end sales (sales above $10 million) have performed best, with an increase of 78% in ten years.



In 2016, 94% of the works sold at fine art auctions were for prices less than $50,000, although these transactions accounted for only 13% of total sales values. Works sold for more than $1 million accounted for nearly half of the market's value (48%) in less than 1% of transactions.

>$1 m

Despite its decline in 2016, growth in the value of sales above $1 million has still outpaced other segments over ten years, increasing by 73% from 2006 to 2016, more than three times the rates of the low and medium segments.



Close to half of the value of sales on the auction market came from just 1% of the artists whose work sold in 2016. Only 15% of artists in the auction sector in 2016 had works priced in excess of $50,000, and a tiny fraction (just over 1%) had works that sold for more than $1 million.

3.1 | Auction Sales in 2016

Sales at public auction of fine and decorative art and antiques came under pressure in 2016, with aggregate values falling by 26% to $22.1 billion.[13] The fine art market was instrumental in the boom in sales up to 2007 and in the recovery of the market from 2009, with especially strong sales in the Post War and Contemporary and Modern sectors. However, sales in most fine art sectors declined in 2016, with significantly lower volumes and values at the highest end of the market.

Unlike the dealer market, the auction sector is very concentrated, with an important top tier of the ten largest major multi-national auction houses accounting for over 65% of sales. There is also an important second tier of over 500 auction houses in different national markets that, although inferior to the top ten in terms of the value of sales, have significant sales and a foothold in international trade. Then there is a third tier of small but significant auction houses in most national markets that tend to specialize in their own national art and domestic areas. In most countries, there are also a number of auction houses that regularly sell art alongside other auctionable property such as real estate, cars and collectible items.

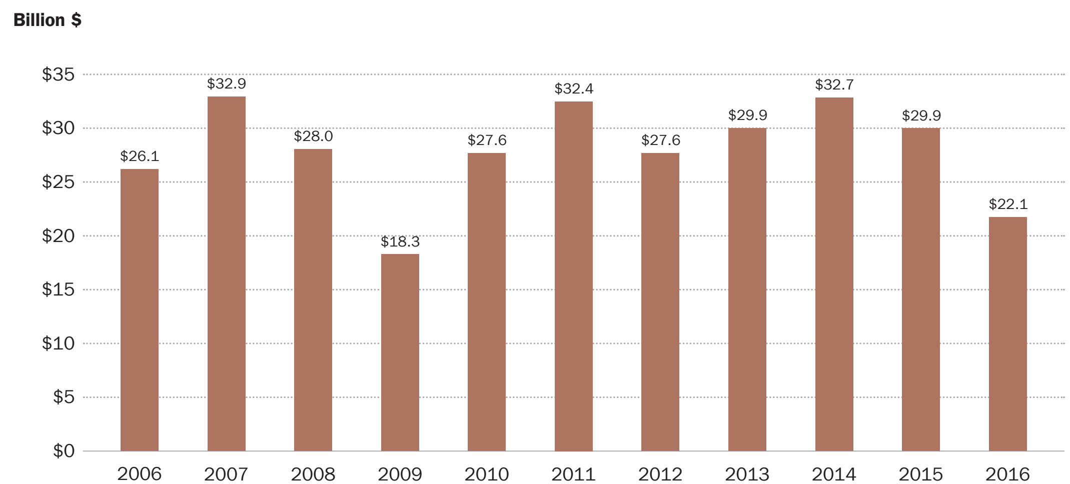
In the top-tier auction houses, fine art accounted for an average of just over 70% of the value of sales. In the second tier, it averaged 53% and in the lower tier houses around 30%. These ratios vary widely between countries and are based on the averages aggregated across all countries in 2016.

Auction sales boomed up to 2007, with strong increases in the value and volume of sales, but, like the market as a whole, suffered a substantial decline in sales in the aftermath of the global financial crisis, losing 44% of total values in the two years from 2007 to 2009. While the Chinese market was instrumental in supporting the recovery during the period from 2009 to 2011, strong fine art sales in the US drove the market from 2012, with auction sales reaching a high of just under $33 million by 2014. However, sales lost more than 30% of their value since that point with two years of declining sales. Sales have averaged growth of 13% per annum in the ten-year period from 2006 to 2016, but were 15% less in 2016 than the level achieved ten years earlier.

Christie's and Sotheby's continued to dominate the auction sector, with a combined 38% share of the auction market, down 4% year-on-year (based on their public auction sales only). The two houses had a larger share in some art market sectors also, accounting for the majority of sales values in the Post War and Contemporary market and Modern sectors.

13 Public auction sales only (excluding private and online sales by auction houses).

Figure 3a | Global Auction Market 2006 to 2016



© Arts Economics (2017) with data from Collectrium, AMMA, and various auction houses

Sales at public auction of fine and decorative art and antiques came under pressure in 2016, with **aggregate values falling by 26%** to $22.1 billion.

Christie's, the market leader, reported total sales of £4 billion ($5.4 billion), down 27% in US dollar terms on 2015, the second year of declining sales from the record high achieved in 2014 of $8.4 billion. Their sales included: $4.4 billion in public auction sales (down 32% on 2015); $67.1 million in online sales (up 84% year-on-year); and $936 million in private sales (up 10% on 2015 and accounting for 17% of their total sales, an increase of 5% in share on 2015).

Sotheby's total sales at public auctions reached $4.1 billion, down 31% on 2015 (the second year of falling sales from 2014, which was also a record high for the company). They also generated private sales of $583 million or 14% of the auction and private sales total. Private sales at Sotheby's have fluctuated over the last five years, from a high of 23% in 2013 to a low of 11% in 2014. The share in 2016 is up 2% (from 12%) in 2015.

China's Poly Auction was the third largest auction company with public auction sales (including sales in Beijing, Hong Kong and Shanghai from 2016) of just under $1.3 billion[14], up 1% in dollar terms on 2015, the majority of which were in their Beijing headquarters. The next largest houses worldwide included Heritage auctions, with sales of $850 million, down marginally on 2015 (and down 12% from their record year in 2014 with $969 million), China Guardian reporting sales of $759 million (up 6% year-on-year), and Beijing Council with $768 million. Bonham's was again among the top-tier houses with sales of over $622 million (down 15% year-on-year) and Phillips had sales of $568 million (including $500 million in public auction sales and $68 million in private sales).

All of the top-tier houses engaged in private sales, and these rose to an average share of 16% of turnover in 2016. For the smaller and second-tier houses, the level of private sales is generally lower, and the survey of the sector showed a fall of three percentage points in average share to 8% in 2016. (These second-tier houses reported that on average 75% of their sales were made at public auction and the remaining 17% were online.[15])

16%

All of the top-tier houses engaged in private sales, and these rose to an average share of **16% of turnover in 2016.**

14 Sales data is from AMMA, the Art Market Monitor of Artron. Data is reported to Arts Economics in January each year and pertains to all data available and reported to AMMA by December 31st of the previous year.

15 Auction houses were asked to report sales made via an online auction, not simply including online bidding. For some auction houses, online auctions were hosted via third-party platforms, which, in a few cases, may have meant that there was also an offline sale taking place. This is in contrast to the figures supplied by top-tier houses, where they reported only their purely online sales.

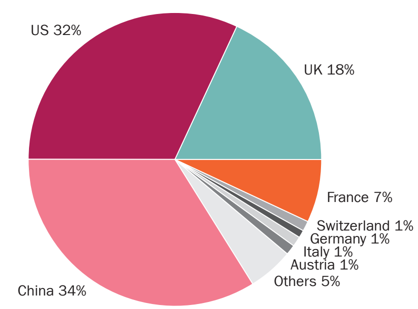
3.2 | Market Share and Global Distribution of Sales

The geographical market share of global auction sales altered in 2016. The three major markets of the US, China and the UK, accounted for a joint share of 84% of total sales in 2016, down 1% year-on-year. But due to the fall in US auction sales and relatively stable performance at the high end in China, Chinese sales exceeded the US market, giving China the leading market share in this sector with 34% by value (versus 32% in the US). This represents a rise of almost 8% in share for the Chinese market and a decline of 6% for the US. The UK's share was stable at 18%, as was the share of the EU as a whole at 30%.

The changing hierarchy of global sales in this sector in contrast to the global market share of the entire market discussed in Chapter 1 demonstrates both the dominance of the auction sector in China (which still accounts for close to 70% of sales) as well as the strength of the dealer sector in the US and Europe.

The interpretation of any analysis of the volume of auction sales in the global fine and decorative art market is more difficult than the value of sales. Many auction houses sell large volumes of decorative art and collectibles that can vary widely over time, between sales and regions. Therefore

Figure 3b | Auction Market Global Share by Value in 2016

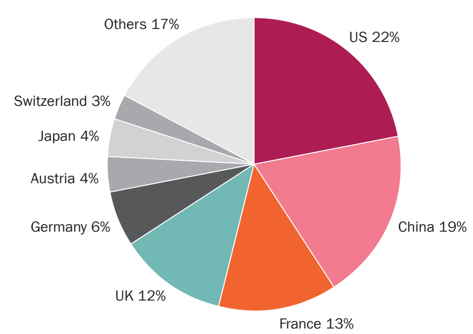


© Arts Economics (2017) with data from Collectrium, AMMA and various auction houses

34%

Chinese auction values exceeded the US market, giving China the leading market share in this sector with 34% of sales (versus 32% in the US.)

Figure 3c | Fine Art Auction Market Global Share by Volume in 2016



© Arts Economics (2017) with data from Collectrium

The number of fine art auction transactions **fell 23%** in 2016, its second year of declining numbers.

to compare market share between countries on a consistent basis, the fine art auction sector can provide a better benchmark for comparison.

The number of fine art auction transactions fell 23% in 2016, its second year of declining numbers. The US had the largest share of fine art auction sales with 22% of transactions (up 2% on 2015), followed by China with 19% (up 6%). France had a 13% share, which was up 2% year-on-year and remained slightly higher than the UK. While some smaller markets had increases in sales, all of the larger markets experienced a drop in the volume of fine art auction sales in 2016, and many had double-digit declines.

3.3 | Sales Rates and Estimates

Besides looking at trends in sales values and volumes, another means to assess annual performance and the confidence of buyers and sellers in the market is to analyze sales rates or the share of works sold versus unsold or bought-in at auction.

Presale high and low estimates are set prior to auction, with the reserve price generally at or below the low estimate. If bids fail to pass the reserve price, works are bought-in. Increasing buy-in rates can be indicative of both demand issues and supply issues in the market (for example, a lack of the higher quality or sought after works on sale). They are also tied to the accuracy of auction experts' appraisals. Although some studies have shown evidence of bias in particular periods or sectors, the most consistent empirical evidence suggests that, when measured correctly and over the long-term, experts' estimates are generally unbiased.[16] Market uncertainty and unexpected price movements may however reduce their accuracy during uncertain periods.

Sales rates are also critical in measuring downside risk for buyers and sellers. In order to buy a work, you must pay more than reserve price, but there are no guarantees it will sell above this price in future. A real risk for buyers intending to sell a work in future (and current sellers) is not only that the work does not make its estimate, but also that it does not sell at all. Works bought-in at auction may also have a significantly deteriorated future value, due to reference price and common value effects in the market (or what is commonly called being "burned" at auction[17]).

Buy-ins are significant in the auction market and vary significantly between sectors (see Chapter 5) and between individual auctions. Looking at data on fine art auctions in 2016, the uncertainty prevalent in the market was evident, with the rate of buy-ins rising six percentage points year-on-year from 2015 to 33%. The key regions where rates rose were the UK and some other parts of the EU, with relatively stable rates in the US, France and China.

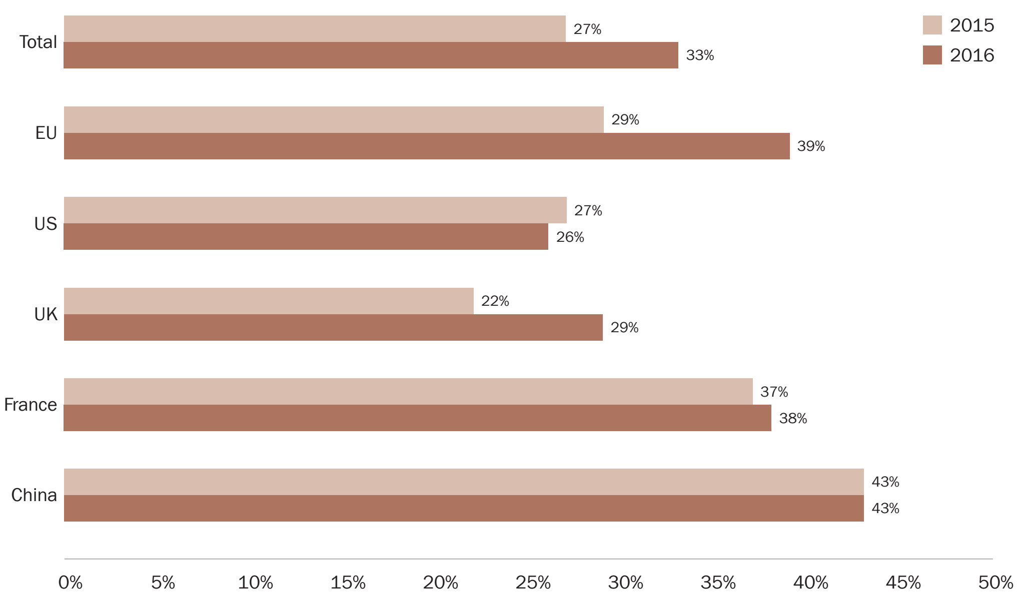
Demand may also have been weaker than anticipated at fine art auctions in 2016. Table 3a sets out the lots sold and value of sales versus auction estimates, giving the share of works sold above, below and within the average presale estimate range. The number of lots (and value of sales) that sold for higher-than-anticipated prices was lower in 2016 than in 2015. Lots selling within the anticipated range of prices dropped by 13% while those selling below the low estimate increased by 16%. Lots sold below the low estimate also accounted for the highest share of individual transactions in 2016 (versus the lowest in 2015).

Although market-wide rates mask many individual issues between auctions, sectors and regions, this suggests that, on aggregate, there was weaker than expected buying at auction in 2016. However, one important factor to note in reality is that, although estimates may be unbiased over the longer term, there are certain pressures in very competitive markets that can affect estimates and their correlation with sales results in some periods. According to experts in the auction sector, in recent years as competition for vendors has become

16 See McAndrew, Thompson and Smith (2010) "The Impact of Reserve Prices on the Perceived Bias of Expert Appraisals of Fine Art." *Journal of Applied Econometrics*, Vol 27, No. 2:235–252.

17 Empirical studies have shown that paintings that fail to meet their reserve price at auction return significantly less when sold in future. See Beggs, A. and Graddy, K. (2008) "Failure to Meet the Reserve Price: the Impact on Returns to Art." *Journal of Cultural Economics*. Vol 13, No.4: 301–320.

Figure 3d | Buy-In Rates at Fine Art Auctions: 2015 versus 2016



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more intense, there has been some increasing pressure to commit to a higher estimate in order to secure the sale of a particular work. This may push estimates up for certain works in some periods, and also implies that works selling within their estimate range are actually performing better than would be otherwise implied.

Overall, for the majority of the works that were brought to auction, those that actually sold (and were not bought-in), sold at expected or better-than-expected prices, and the fall in values in the auction sector is likely to have been highly contributed to by supply issues (particularly at the high end) rather than solely a demand-driven decline.

3.4 | A Note on the Chinese Auction Market

Auction sales still dominate the market in China with a share of close to 68% of the value of sales in 2016 (including public and private auction sales). According to the Chinese Auctioneers Association's annual report in 2016 there were 438 auction houses in Mainland China, up by 42 in number year-on-year. As the market has grown, there has been some increased concentration at the top of the auction sector, with the largest companies taking increased share from the second- and lower-tier houses, and some smaller companies closing or reducing activities. Including sales in Hong Kong, the top five auction houses in China (Poly Auction, Beijing Council, China Guardian, Sotheby's Hong Kong and Christie's Hong Kong) accounted for a 55% share of the market in 2016. In Mainland China alone the share was higher, with the top five houses accounting for more than 60% of the market's sales.

Many of the top houses have operations in both Hong Kong and Mainland China. Sales in Mainland China have dominated in recent years by both the value and volume of sales, and accounted for 71% of the value of sales in 2016 (up 7% from a ten-year low of 64% in 2015) and 85% of the lots sold. Sales in Mainland China performed better year-on-year with a marginal reduction in dollar terms versus a fall of over 25% in Hong Kong.

Table 3a | Share of Fine Art Auction Sales Versus Presale Estimates

Share of Sales	2016	2015	Change year-on-year
Buy-ins	33%	27%	6%
Lots above estimate	36%	39%	–3%
Lots within estimate	25%	38%	–13%
Lots below estimate	39%	23%	–16%
Value above estimate	56%	58%	–2%
Value within estimate	39%	37%	2%
Value below estimate	5%	5%	0%

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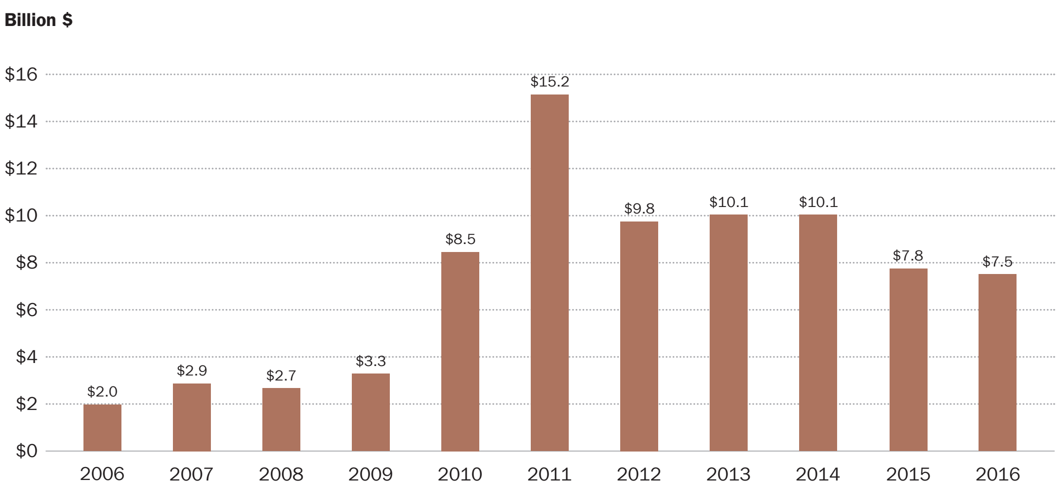
Figure 3e | **Auction Sales in the Chinese Auction Market 2006–2016**



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While sales in the lower value segments of the Chinese market declined, the segment priced at over ¥5 million ($750,000) advanced in value **by nearly 60%.**

The auction sector as a whole has seen dramatic changes in size in China over the last ten years. After an extraordinary boom in sales from 2009 to 2011 when other markets were struggling to recover from the fall-out from the global financial crisis, China reached the top of the global art market ranks. This boom ended abruptly in 2012 with a sharp contraction in sales of 35%, followed by two years of stagnation with cautious buying and low growth in all sectors.

The auction sector again witnessed a significant decline in sales in 2015, with values falling 23% year-on-year to $7.8 billion, its lowest level of sales since 2009, as values and lots sold fell, particularly in the fine art auction market. In 2016, sales continued to decline slightly in dollar terms, falling 4% year-on-year to $7.5 billion.[18]

While sales in the lower value segments of the market declined, the segment priced at over ¥5 million ($750,000) advanced in value by nearly 60%. Some of the strongest year-on-year growth was in the highest priced part of this segment: the number of lots sold for greater than ¥50 million ($7.5 million) grew by 66% while values in this highest segment doubled.

Chinese painting and calligraphy was again the largest sector of the market in 2016, accounting for 48% of sales, down 3% year-on-year and from a high of 66% at the peak of the market in 2011.[19] The second largest sector, and best performing of the Chinese art market, was ceramics and other wares. This decorative arts sector has grown considerably in importance, with its share of total sales up from 25% in 2010 to 40% in 2016. The smallest sector of oil painting and contemporary arts also performed relatively well, maintaining a market share of just 12% by value in 2016. This share has not changed substantially in recent years, but was considerably higher in the period between 2006 and 2008 when the Chinese contemporary market underwent a local and international boom in sales, and the sector averaged a share of 28% over three years.

The volume of transactions in the auction market in China fell by 13% in 2016, the third year of declining sales volumes at auction, with the fine art sectors showing the largest decreases in sales. From 2005 to 2011 the numbers of transactions increased by more than 200%, but in the years since then, growth in volumes has been uneven and restrained. The volume of lots fell substantially in 2015 (by 30%) and, with the continued decline in 2016, the number of transactions is now close to 50% below their peak in 2011. Experts in the market believe that the increased supervision of

18 This change in sales values is affected by currency changes. Measured in RMB terms the market actually rose slightly (by 2%).
19 The classification of works sold at auction in the Chinese auction sector differs considerably from those used in Western auctions (and in Chapter 3). An explanation of these sectors is given in the Appendix.

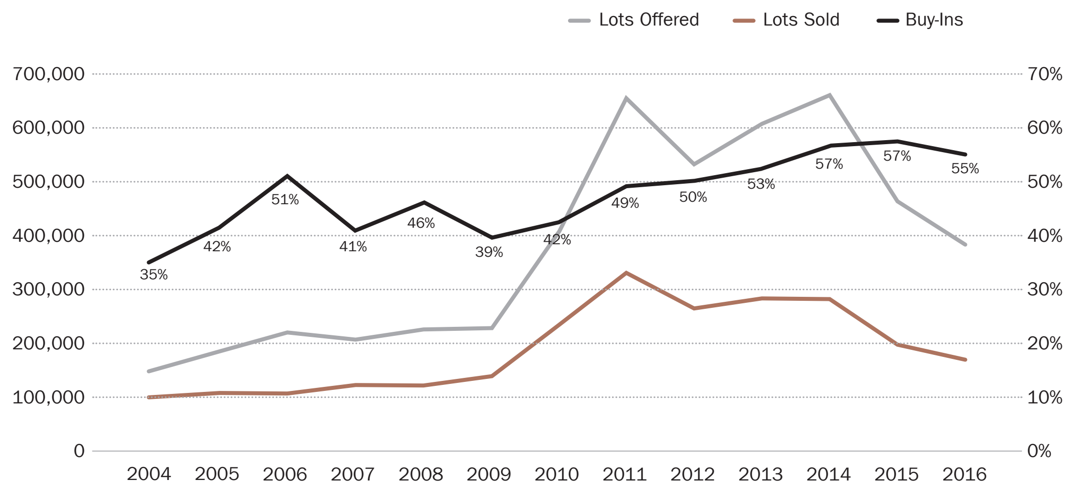
the market, particularly in connection with China's anti-graft campaign, and the decline of speculative investors have contributed to the substantial drop in volumes over the last five years.

Since the start of the market's boom in 2009 there has also been a widening gap between the number of works coming onto the market and those actually being sold. The number of lots offered for sale in 2016 dropped by 17%, with the slightly lower decline in lots sold, reducing the rate of buy-ins at auction to 55%. However, the rates of buy-ins remains very high in China on average, both relative to other countries (such as the US at 26%) and in relation to previous rates in China, which were as low as 35% in 2004. These high rates are indicative of both supply and demand issues, with an oversupply of lower quality works, continuing problems with fakes in the market, and a lack of top quality works with well-established provenance despite high demand.

Most dealers and auction houses in China agree that sourcing high quality works remains their biggest challenge, as demand far outstrips supply. Many dealers have now been actively sourcing works in overseas auctions to sell in China. This process was simplified further in 2016, with an announcement from the government at the end of the year that the 6% import tax on paintings and sculptures (already reduced from 12% in 2012) would be halved again to 3% from January 1st 2017. The government introduced the tax cut to encourage the repatriation of Chinese art from abroad and to stimulate cross-border trade in Western and Chinese art. Auction houses work closely with antique and fine art dealers, and it is estimated that over 90% of the antiques auctioned in China are currently sourced from dealers.

Besides the issue of buy-ins, another recurring problem in the Chinese market is the significant extent of late payment or non-payment by winning bidders at auction. While there has been much discussion of this issue in China, and regulations are in place, the rate of non-payment at auction has increased in the last three years. In the period from May 2015 to May 2016, the non-payment rate at Chinese auctions rose to 41%, up 5% year-on-year and from a low of 30% in 2013/14.

Figure 3f | Lots Offered Versus Sold and Buy-in Rates in the Chinese Auction Market 2004-2016



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Most dealers and auction houses in China agree that sourcing high quality works remains their biggest challenge, as **demand far outstrips supply.**

For lots over ¥10 million, however, there was some improvement. In 2016, 52% of lots at this level were completely paid (versus 37% the previous year), 15% partly paid, and 32% unpaid (down 4%). Clearing rates also differed by sector with the best rates in the 20th century and contemporary art sector, with only 8% unpaid after six months, versus 42% in Modern Chinese Painting and Calligraphy and 57% in the antiques sector.

Non-payment and late payment remain important issues in certain sectors and segments, and can often pose severe cash flow problems for smaller businesses that cannot absorb the risks. There are several reasons for high rates of late payment in the market, including continuing issues related to questions of authenticity or provenance, and a different culture of negotiating and transacting. Non-payment or late payment at auction is not a problem unique to China, and occurs with varying frequency at small and large auction houses around the world. However, its extent is much more marked and persistent in China, posing a significant drag on the market's confidence and the depth of development of the auction house sector.

Non-payment and late payment remain important issues in certain sectors and segments, and can often pose severe cash flow problems for smaller businesses that cannot absorb the risks.

3.5 | Fine Art Auction Prices

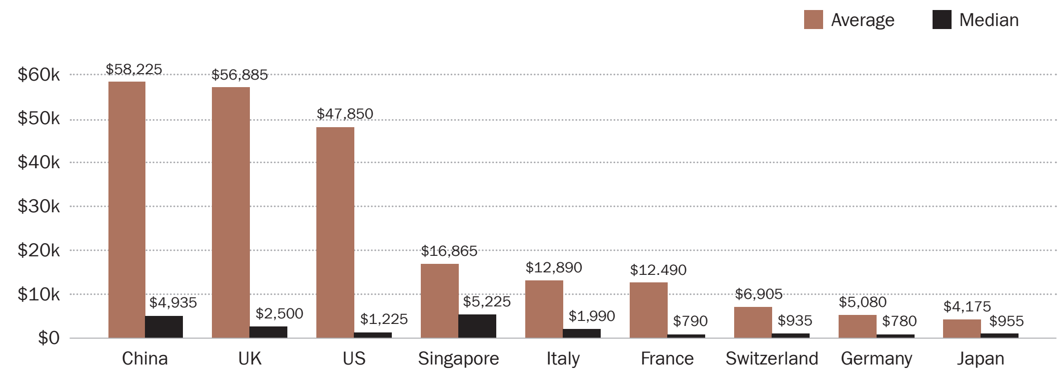
The fine art auction sector has been instrumental in driving some of the biggest trends in the market over the last ten years. Fine art sales propelled the boom in the market up to 2007 and were critical in its recovery from 2009. However, this sector has also been one of the key drivers in the market's decline in 2016, particularly with a lower volume of the highest-priced lots appearing on the market during the year.

As noted above, fine art[20] dominated total sales values in 2016 and, despite declines, remained the sector where most of the highest prices were achieved at auction. The decline in fine art sales in 2016 was due to a reduction in the volumes sold and lower prices, with average prices decreasing 13% year-on-year. In a very heterogeneous market such as art, global average prices are of very limited value in exploring price dynamics, and even national averages can only offer a broad benchmark of relative values over time.

In many national markets, average prices at auction for fine art declined in 2016, with the notable exception of China, which saw an increase in averages of just over 30% (to $58,225) and the UK, with a 15% rise (to $56,885). In the US, the decline in prices was marked, with values dropping 35%, but declines were smaller in other markets such as France with only a 1% contraction.

The decline in fine art sales in 2016 was due to a reduction in the volumes sold and lower prices, with average prices decreasing **13% year-on-year.**

Figure 3g | Averages and Median Fine Art Auction Prices in 2016



© Arts Economics (2017) with data from Collectrium | *All prices are rounded to the nearest $5

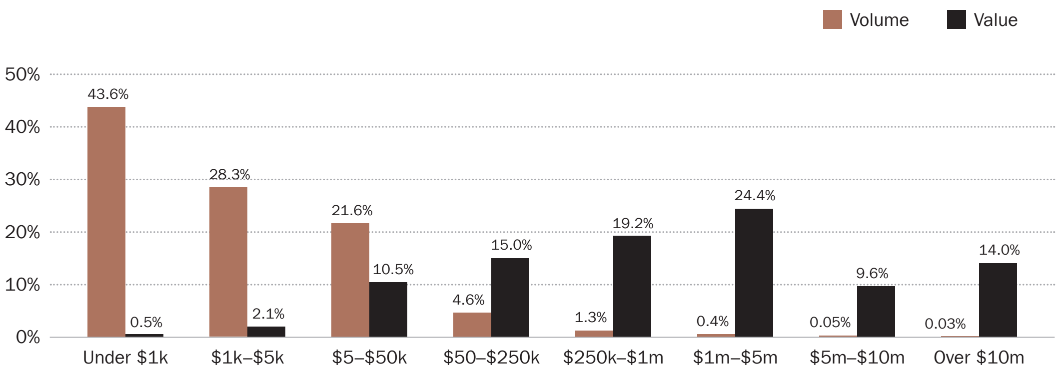
Average prices at auction are often skewed upwards by a small number of very highly priced lots. To gauge trends in prices over time and between markets, the median price is therefore a useful comparative measure and is analyzed with averages in Figure 3g.[21] The Figure shows that averages in all markets are distorted by high prices, but more markedly so in the larger markets where the top-end sales occur. In the US, the average price was 39 times the median price in 2016, and in the UK is was 23 times its size.

This was in contrast to between two and ten times its size in other smaller European markets where there are generally lower prices and fewer very highly priced works sold at auction relative to the total number of lots sold. In China, which has a strong middle market at auction, the ratio is 12:1, and there is also a much lower ratio in smaller markets, such as Singapore, where there is a very low volume of sales at auction, but relatively higher prices.

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

21 The median is a measure of central tendency that is used when distributions are skewed to get a better idea of where the middle of market is. The median price is simply the price separating the higher and lower halves of the distribution of prices: if prices in the art market were arranged from lowest to highest, the median price is the middle price or center point along the spectrum.

Figure 3h | **Share of Lots Sold and Total Value at Global Fine Art Auctions in 2016 by Price Bracket**



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At the high end of the market, works sold for more than $1 million accounted for nearly **half of the market's value** (48%) in less than 1% of transactions.

Figure 3h sets out the value and volume of aggregate fine art auction sales by reference to price segments, showing the highly skewed nature of prices in the art market.[22] In 2016, 94% of the works sold at auction were for prices less than $50,000, with 72% sold for $5,000 or less. However, these lower value lots made up a small portion of the market's total sales value: lots under $50,000 accounted for 13% of total sales values, and those under $5,000 only 3%.

At the high end of the market, works sold for more than $1 million accounted for nearly half of the market's value (48%) in less than 1% of transactions. The number of lots sold at auction for over $1 million fell by 28% year-on-year and the share of value that the segment accounted for fell also fell by ten percentage points (from 58% in 2015).

The largest single segment by value in 2016 was works selling between $1 million and $5 million (accounting for 24% of total sales), whereas in 2015 the ultra-high segment of prices over $10 million accounted for the greatest share with 27%.

3.6 | Price Segmentation and Growth

Because the market is so skewed by value, the addition or subtraction of a relatively small number of very highly priced lots at auction can have a significant impact on aggregate sales, despite the fact that these trends are unrelated to the majority of businesses in the art market, which transact predominantly at lower prices. One of the main drivers of growth in the art market over the last ten years has been the fine art sector, and within it, sales at the high end of the market. Anecdotally, both dealers and auction houses have reported that since the global financial crisis and contraction in the art market in 2009, while the higher priced end of the market has recovered well, the middle market has come under increasing pressure and remains the most difficult segment of the market in which to make sales.

The definition of "middle market" varies significantly between businesses, with record prices in one business considered low or mid-priced in another. In order to analyze the performance of the different segments, the following broad definitions are therefore used to divide up the market:

1. The low end – prices up to $50,000.

2. The middle market – prices from $50,000 to $1 million.

3. The high end – prices in excess of $1 million, including the "ultra-high end" with prices in excess of $10 million.

22 The data used in Figure 3h and other price brackets includes all lots sold at auction regardless of their presale estimates. This differs from data used in previous global reports where the analysis only included lots with estimates in excess of $500. The Collectrium and other auction data used here offers a more comprehensive and accurate view of the entire fine art auction market.

Analysis of the growth of sales values within different price segments has shown that the high end of the auction market has grown at a much faster rate than the lower or middle segments up to 2015. In the ten-year period from 2005 for example, the low and middle end segments of the market grew relatively slowly and at a similar pace. The low end segment of prices up to $50,000 grew by 65% in value, and middle market (in the range between $50,000 and $1 million) grew 89%. The higher end of the market of works over $1 million on the other hand saw much stronger growth, increasing in value by over 400%, while the ultra-high segment (sales over $10 million) outperformed even within this segment, advancing by over 1,000% in value from 2005.

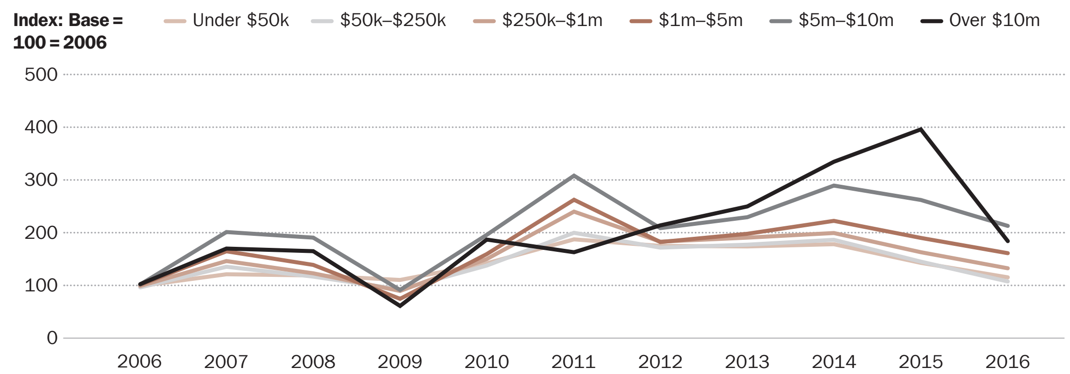
However, this trend reversed to some extent in 2016, with both the value and volume of sales in the high end of market falling, with the largest declines experienced at the highest price levels. This fits with anecdotal evidence from auction experts and dealers during the year, who have said that, against a general backdrop of economic uncertainty, there has been some tightening of supply of the highest end consignments by vendors, some of whom have perceived it as a poor or risky time to sell, despite the fact that demand for highly priced works remains high.

Figure 3i shows an index of the growth in sales values in the fine art market in the different price segments over the last ten years using 2006 as the base year. In this period, it is clear that the high end of the market has grown at a much faster rate than the other segments, but this has been moderated by the sharp declines in 2016.

The low end saw the lowest growth over ten years, escalating by only 11%, while the middle market grew by 21%. The high end, on the other hand, grew by 73% in value, although the ultra-high segment had a much more moderate margin in growth rates versus the ten-year period to 2015, advancing by 78% from 2006 to 2016.

The high end witnessed the sharpest decline in sales annually in 2016, falling 34% (versus a decline of 25% in the low end and 20% in the middle), and it was the ultra-high end that fell the most, with sales values decreasing by 53%. Despite the poor performance year-on-year, values at the high end have still recovered much more strongly than the other segments since the low point of the market in 2009, with a much greater increase in sales over the period and stronger compound annual growth rates (CAGRs). The high end grew over 148% in value since 2009 (with the ultra-high end increasing by close to 210%), versus a much slower rate of 35% in the middle segment and only 1% in value in the low end.

Figure 3i | Growth of Sales by Value in Price Segments



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Within these broader ranges of low, medium and high, the best performing individual segments over this ten-year period were the segment of works priced at less than $1,000 and those priced between $5 million and $10 million, which both more than doubled in size. The segment under the most pressure on the other hand has been the middle market, and within that market, the segment of prices below $250,000 has under-performed sales priced above $250,000. In the decade from 2006, sales in the segment of prices between $250,000 and $1 million grew three times the amount of the segment between $50,000 and $250,000. These differences are even more marked in the recovery period from 2009: while the segment over $250,000 advanced in value (by 8%), the $50,000 to $250,000 segment has experienced further declines, dropping 7% in value, including a 23% drop year-on-year from 2015 to 2016.

Table 3b | **Annual Growth, Total Growth and Share of Sales by Value**

	Low end			Middle Market		High end		
Price Segment	**Under $1k**	**$1–$5k**	**$5k–$50k**	**$50–$250k**	**$250k–$1m**	**$1m–$5m**	**$5m–$10m**	**Over $10m**
Share in 2006	0%	2%	14%	19%	21%	22%	7%	15%
Share in 2016	1%	2%	11%	15%	19%	24%	10%	19%
Change in Value 2006–2016	**211%**	**32%**	**4%**	**10%**	**30%**	**59%**	**105%**	**78%**
CAGR 2006–16	12%	3%	0%	1%	3%	5%	7%	6%
Change in Value 2009–2016	**354%**	**2%**	**–13%**	**–7%**	**8%**	**18%**	**12%**	**13%**
CAGR 2009–16	24%	0%	–2%	–1%	1%	2%	2%	2%
Change in Value 2014/15	**79%**	**–16%**	**–20%**	**–22%**	**–18%**	**–13%**	**–10%**	**19%**
Change in Value 2015/16	**–8%**	**–22%**	**–26%**	**–23%**	**–18%**	**–15%**	**–18%**	**–53%**

It is clear from Table 3b that the two segments of the market that have struggled the most in the years since the bottom of the market in 2009 have been those between $5,000 and $50,000 and between $50,000 and $250,000, both of which have decreased further in value.

In terms of the volume of sales, all segments saw a decline in lots sold over 2016. Volumes in the high end fell 17%, with a slightly higher decline in the middle and low ends. However, the ultra-high end saw the greatest decline with the number of works sold falling by 48%. Over ten years the low and high ends have grown at the same pace, with CAGRs of 6% each. The middle has seen much slower growth both in the ten-year period (at 1%) and since 2009. Again the two segments with the slowest growth both over ten years and since 2009 have been those between $5,000 and $50,000 and the segment between $50,000 and $250,000.

Table 3c | **Annual Growth, Total Growth and Share of Sales by Volume**

	Low end			Middle Market		High end		
Price Segment	**Under $1k**	**$1–$5k**	**$5k–$50k**	**$50–$250k**	**$250k–$1m**	**$1m–$5m**	**$5m–$10m**	**Over $10m**
Share in 2006	23%	33%	34%	7%	2%	0.4%	0.04%	0.02%
Share in 2016	44%	28%	22%	5%	1%	0.4%	0.05%	0.03%
Change in Volume 2006–2016	**213%**	**41%**	**5%**	**7%**	**28%**	**57%**	**110%**	**79%**
CAGR 2006–16	12%	3%	1%	1%	3%	5%	8%	6%
Change in Volume 2009–2016	**532%**	**–1%**	**–7%**	**14%**	**47%**	**113%**	**137%**	**147%**
CAGR 2009–16	30%	0%	–1%	2%	6%	11%	13%	14%
Change in Volume 2014/15	**113%**	**–16%**	**–19%**	**–23%**	**–17%**	**–15%**	**–8%**	**16%**
Change in Volume 2015/16	**–17%**	**–20%**	**–28%**	**–24%**	**–19%**	**–13%**	**–19%**	**–48%**

The strong growth at the high and ultra-high ends of the market has had an impact on their share of the fine art market's value. In 2006, the middle and high ends of the market were very close in share, accounting for 40% and 43% of total sales values respectively. However, as the market has grown increasingly polarized, sales values have become consolidated at the top. By 2015, the high end accounted for the majority of sales (57%) versus 31% in the middle segment and 12% in the low end. Although the share of the high end fell back four percentage points in 2016 (to 53%), it still accounts for the majority of values, with nearly 20% of the total market's value in the ultra-high end segment of sales priced over $10 million.

This changing structure of the art market by value has come alongside very little change in the share of the volume of sales. The low end accounted for the majority of transactions in 2016 (94%) and this has fluctuated in a fairly narrow band over ten years (between 89% and 94%). The high end, on the other hand, has never exceeded 1% of the volume of transactions.

Because of the dominance of sales at the high end of the market in the key art market hubs, geographical market share also fluctuates considerably with price level. The top three markets of the US, China and the UK still made up the majority of sales in all price segments in 2016, but their share increases with increasing prices, particularly in the case of the US, where most of the biggest auctions currently take place.

In the market for works priced below $50,000, these three major markets accounted for just over half (51%) of the market by volume of sales and 67% by value in 2016. However, in the middle market their share by value rose to 83% (and 80% of the volume of sales), with China taking a dominant share of 39%. In the high end market for works priced over $1 million, the three top markets accounted for most of the works sold, by both value (94%) and volume (92%), and the position of the US is clearly dominant in terms of the value of sales, with a 41% share. In the ultra-high end of the market of works priced in excess of $10 million, only 2% of the value of works sold and 3% of transactions were outside these three major markets. Here the dominance of the US was even more pronounced, with a 49% share by value and 48% of the volume of works sold.

The top-heavy nature of the market in recent years also extends to the artists whose works sell at auction, with much of the value centered on a very narrow segment of artists. In 2016 there were around 48,380 unique artists whose work sold at fine art auctions around the world. Close to half of the value of sales in 2016 (48%) came from just 1% of those artists.

In the high end market for works priced over $1 million, the three top markets accounted for most of the works sold, by both **value (94%) and volume (92%).**

Figure 3j | Market Share of the Fine Art Auction Market by Price Segment in 2016

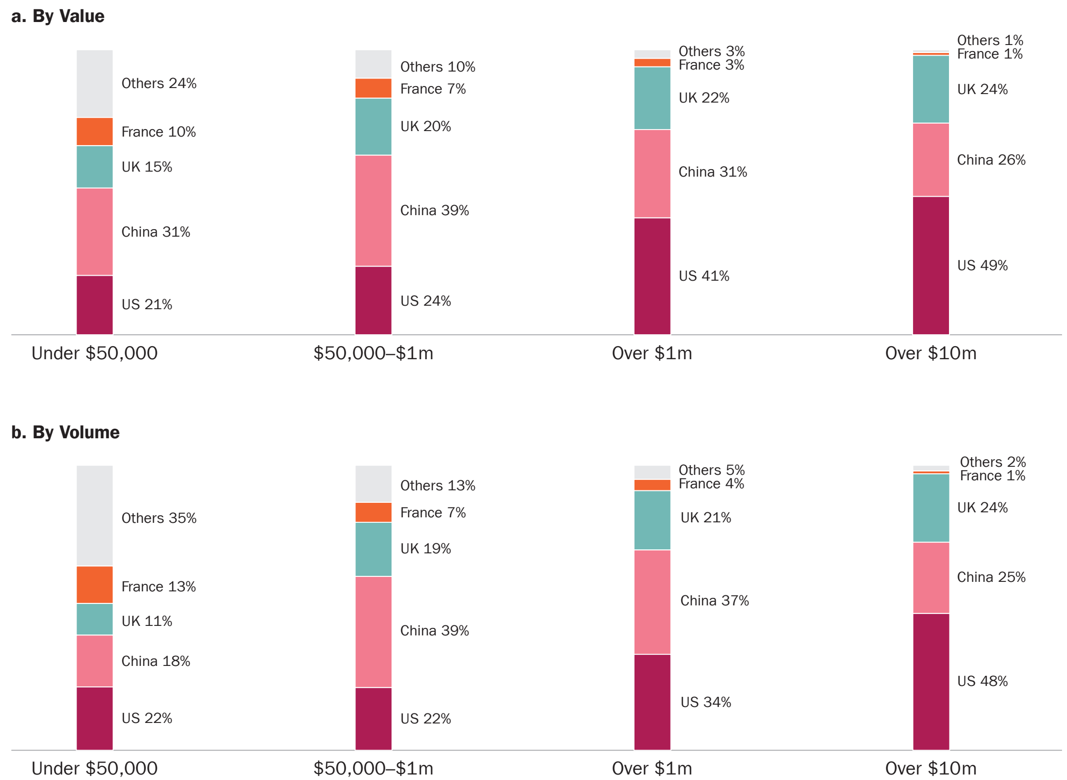

Figure 3k | Share of the Number of Artists by Price Segment in 2016

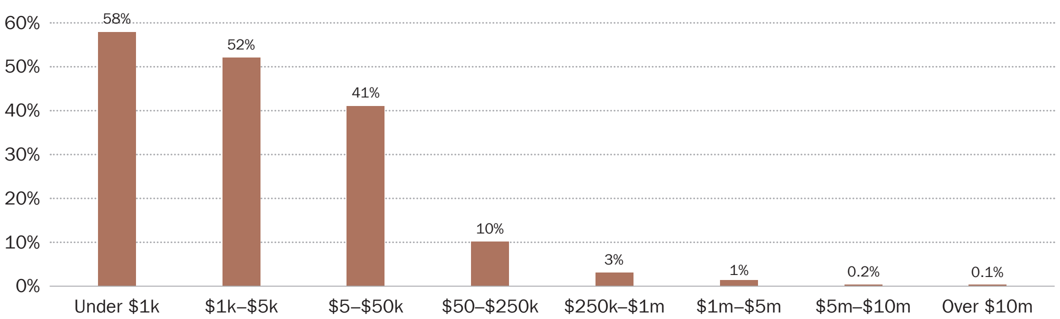

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Figure 3k shows the share of the total number of artists whose works sold on the auction market in 2016 in each segment. The majority of artists had works that sold for less than $50,000, with the densest segment being works selling for prices below $1,000. Only 15% of artists had works priced in excess of $50,000, and a tiny fraction (just over 1%) had works that sold for more than $1 million. In other words, just 15% of artists selling at auction in 2016 accounted for 82% of the value of sales and 5% accounted for two thirds.

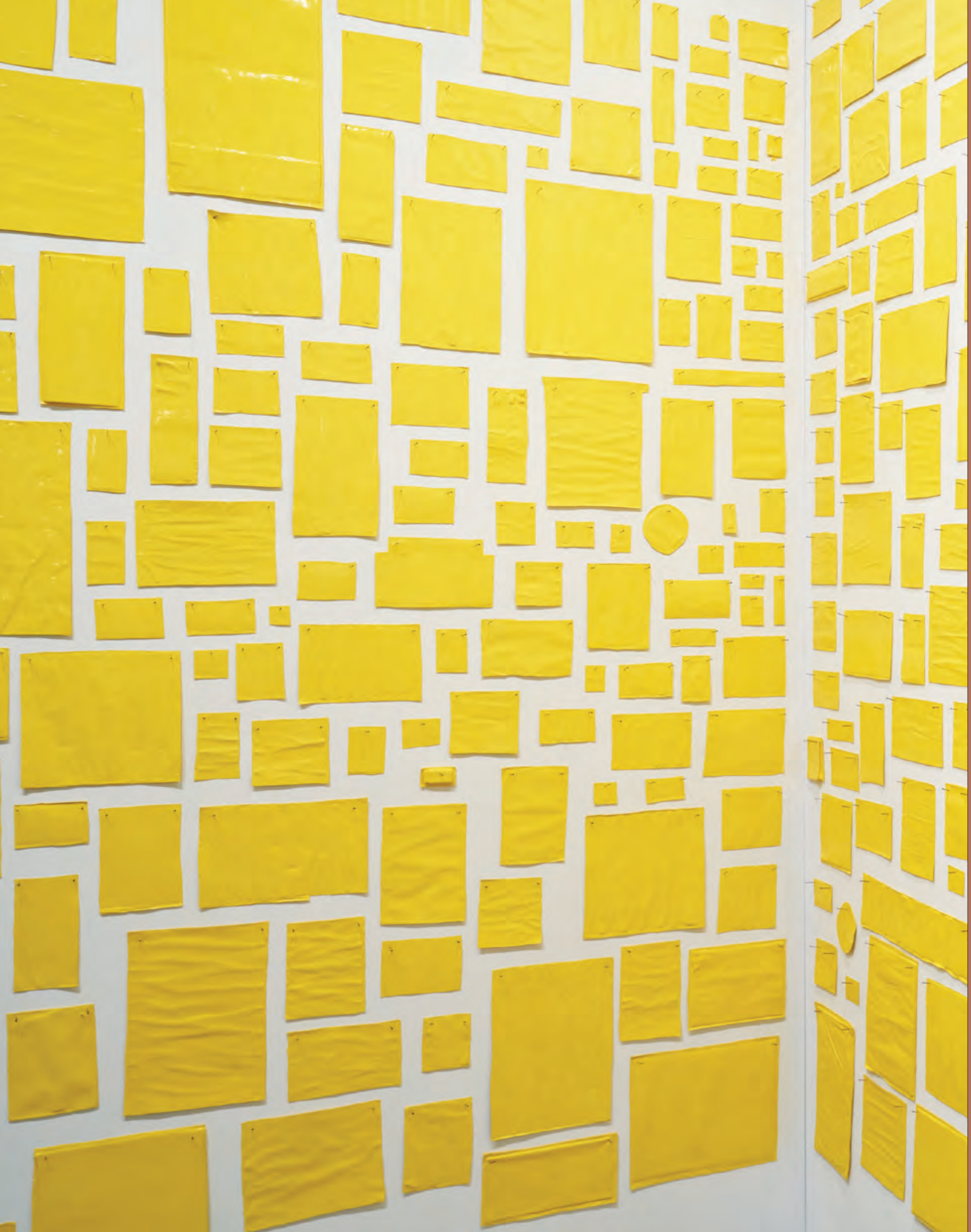
Despite the disproportionately larger decline in fine art sales at the highest priced end in 2016, the polarization towards the highest end in terms of the value of sales continues to be a significant feature of the art market. In contrast, the bulk of sales volumes and most of the artists whose works feature at auction, is at the lower end. The faster than average growth of the highest end over the last ten years has therefore created a thin market at the high end consisting of a very small number of artists and sales carried out at very high prices.

It is important to note that although the high end has been growing the fastest over the past ten years, growth in sales values in this segment does not necessarily indicate a corresponding trend in its profitability. When surveyed in 2016, nearly 70% of second-tier auction houses reported that their most profitable segment in 2016 was works priced at less than $50,000, and only 10% identified the segment over $1 million. A similar picture emerged for dealers, with 66% reporting that their sales priced under $50,000 were the most profitable. On the other hand, just 7% reported that the most profitable segment was those transactions priced over $1 million. However, these results are tied to the volume of sales conducted at these price levels and many dealers reported anecdotally that it was often easier to make profits on a smaller volume of their more highly priced works, than from trying to sell a large volume at lower margins in order to generate sufficient profit.

In top-tier auction houses, while commissions are correlated with price levels and hence greater margins possible at higher prices, the focus of top collectors on a very narrow group of artists and works in recent years has made the competition to locate and secure vendors increasingly intense. Auction houses in recent years have offered a range of financial incentives, including guarantees, to entice buyers, often substantially reducing the profitability from the sale. Although, anecdotally, there has been much talk of reducing these incentives in 2016, there were still examples of high end sales during the year with half or more of the lots on sale guaranteed either by the auction house or third parties[23].

Despite the disproportionately larger decline in fine art sales at the highest priced end in 2016, the polarization towards the highest end in terms of the value of sales continues to be a significant feature of the art market.

23 For example, 35 of the 60 lots sold (from 64 on sale) at Sotheby's Contemporary evening sale on November 17, 2016 were guaranteed as were 17 of the 61 lots sold at Christie's Post War and Contemporary evening sale on November 12, 2016.



Online Sales

4

Key Findings

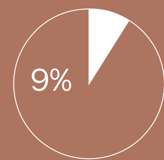
Online Sales

$4.9 b

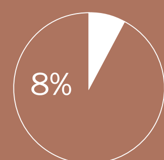
Sales of art and antiques online were estimated conservatively to have reached $4.9 billion in 2016.

↑4%

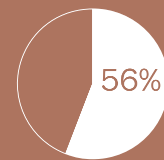
Online sales advanced 4% year-on-year, a relatively strong result in the context of the generally declining market.



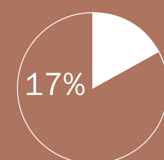
Online sales accounted for almost 9% of the global art and antiques market by value in 2016.



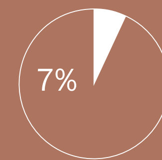
In the dealer sector in 2016, online sales represented an average of 8% of their total sales, up 1% year-on-year.



Online sales have become an important method of dealers reaching new customers, with over half (56%) of the online sales generated by dealers made to new clients that had never been to their gallery or met them in person.



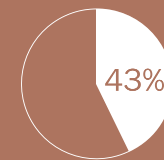
While they represent only 1% or less in most top-tier houses, online sales in second-tier auction businesses averaged 17% in 2016.



In the fine art sector, purely online sales remain low compared to offline. In 2016, only 7% of the number of lots sold at fine art auctions worldwide and 2% of their value were purely online (that is, where an item is posted online only and bidders can only place their bids online).

< $50 k

A survey of 50 companies in the online sector revealed that 24% of their transactions were at prices below $1,000 and 75% were for less than $50,000. The largest single segment was sales between $5,000 and $50,000.



43% of respondents reported that sales between $1,000 and $5,000 had been the most profitable for them in 2016, with a further 29% citing the higher level of $50,000 to $250,000.

4.1 | The Online Art Market[24]

Sales of art and antiques online were estimated conservatively to have reached just $4.9 billion in 2016, or almost 9% of the global art and antiques market by value. These sales are made up of online sales by traditional offline dealers and auction houses, plus estimates for companies selling on their own account. They do not include revenues or commissions of intermediaries or third-party platforms.

Sales advanced 4% year-on-year, a moderate increase in value, but a relatively strong result in the context of the generally declining market. The rates of growth in the online sector for the last two years are significantly less than the growth rates forecast three or four years ago when estimates predicted double-digit increases in sales in the sector in excess of 20%.

↑4%

Sales advanced 4% year-on-year, a moderate increase in value, but a relatively strong result in the context of the generally declining market.

4.2 | E-Commerce in the Auction Sector

Online sales by traditional dealers and auction houses have all advanced significantly in the last five years. In the top tier auction houses, although the online channel remains critical for accessing new buyers, pure online-only sales are still relatively low, averaging 1% or less (with the exception of certain companies such as Heritage which had online sales of 41% in 2016, up from 30% in 2015).

The major auction houses have pursued slightly different approaches to the online sector. Christie's has invested in organically developing its online-only sales since 2011, and hosted more than 100 online-only auctions and buy now sales in 2016, generating a reported $67.1 million. The most popular categories included Contemporary art, American art, Asian art, prints, photography, jewelry and watches, and average prices have nearly doubled in some of these categories in the last five years. While the top selling lot online at Christie's in 2016 was $269,000 (for Sol LeWitt's *Irregular Curves*, average prices online were just under $6,050, with sell-through rates of 91%. Unlike pure-play online platforms, which consign lots from multiple different owners, a significant portion of the property that is consigned to Christie's for online sales comes via single-owner collections.

Auctions of special, single-owner collections have represented the most successful online-only sales for the major houses in the last few years.

Sotheby's, on the other hand, has maintained a partnership-orientated approach to expanding online, notably re-establishing a joint venture with eBay across art and collectibles, as well as launching a collaboration with Artsy for lower priced, single-owner collections in Post War and Contemporary art. Sotheby's reported total online sales of $155 million in 2016, a 20% increase year-on-year which was seen as particularly meaningful given the decline in sales on aggregate. They also reported that online sales and bidding had emerged as the most popular method of participation for new clients, with 52% of all online buyers in 2016 new to Sotheby's.

For second-tier auction houses, online sales were more significant. A survey of second-tier auction houses in 2016 indicated that on average 17% of their sales were online, up 4% on surveys of the sector in 2015. For some respondents, however, these sales include sales via third-party platforms, which can mean that in some cases a physical offline sale may also take place (versus the reported share by the top tier which includes just online-only sales). Respondents reported that 10% of their online sales in 2016 were made through other third-party platforms and 7% via their own website. For those selling online, 32% of the buyers were new buyers who had never been to their premises or had personal contact in any way with the auction house prior to the sale, 27% were regular online buyers with whom they had no other direct contact, and the remaining 41% were regular buyers who had bought offline in the past or had contact with the business previously.

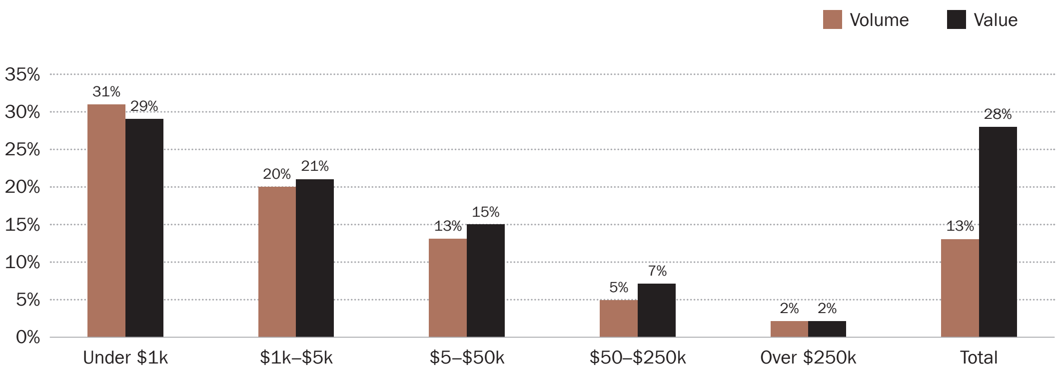
7%

In 2016, only **7% of the number of lots sold** at fine art auctions worldwide and 2% of their value were purely online.

In the fine art sector overall, and including all auction houses (top tier and lower tiers), purely online sales remain low compared to offline. In 2016, only 7% of the number of lots sold at fine art auctions worldwide and 2% of their value were purely online (that is, where an item is posted online only and bidders can only place their bids online).

24 Thanks to Mike Maloney for his contribution to the research on the online sector for this Chapter.

Figure 4a | Share of Online Sales in Sample of US Auction Houses in 2016



© Arts Economics (2017) with data supplied by Auction Mobility and Lofty.com

Data from Auction Mobility (a provider of online and mobile bidding software), suggests that the share of online sales for auction houses in the US (and across all categories of art and antiques) may be considerably higher. An analysis of their bidding and sales data from a sample of over 150 auction houses, reveals that online sales accounted for a 13% share of total sales values and 28% of the number of lots sold in 2016. While the share of online sales in the higher priced segments remained low (accounting for just 2% of the sales made over $250,000), in the lower price brackets, shares were much greater at 29% of the lots sold for less than $1,000 and 31% of their value.

4.3 | Online Platforms and Consolidators

Online third-party (or "3P") platforms or auction consolidators have become a critical part of the link to e-commerce for many traditional auction houses. These platforms often host online auctions with inventory from third-party houses, while some provide access to online bidding for the offline auctions of third-party auction houses or simply direct traffic to member's sites. These platforms have been crucial in enabling access to online selling for smaller auction houses that may not have had sufficient budgets to develop their own e-commerce facilities. In the last number of years, sites such as Catawiki, LiveAuctioneers, Invaluable, and BidSquare have all become increasingly important in this space, and some have developed into brands within their own right, providing the first point of contact for online buyers to search for inventory.

These sites offer works from regional and local auction houses, as well as occasionally through individual owners in a live, online auction format. Catawiki has raised nearly $100 million in capital over the last two years, anchoring their strategy in establishing a foothold in countries where eBay is not widely adopted. LiveAuctioneers recently launched Jasper52, a branded proprietary platform that spans multiple categories and conducts sales via auctions and buy now e-commerce. Invaluable, founded in 1989, operates a similar business model, but has created unique strategic opportunities with offline partners, including Sotheby's, while Bidsquare, a platform launched by six renowned regional auction houses (including Brunk, Cowan's, Leslie Hindman, Pook and Pook, Rago, and Skinner), conducts daily auctions from more than 4,000 different auction houses worldwide.

Online third-party platforms or auction consolidators have become a critical part of **the link to e-commerce** for many traditional auction houses.

4.4 | Online Sales in the Dealer Sector

In the dealer sector in 2016, online sales represented an average of 8% of their total sales, up 1% year-on-year. The majority of these sales (5%) were made through the dealer's own website, with the remaining 3% through third-party platforms, the most commonly cited being Artsy and 1stDibs. Online sales have become an important method of reaching new customers, with over half (56%) of the online sales generated by dealers made to new clients that had never been to their gallery or met them in person. Just over one third (35%) were to buyers with whom they have had personal contact but who prefer to buy online, and the remaining 9% were buyers who had never been to the gallery or had personal contact with the dealer but who regularly bought from them online.

As in the auction sector, third-party platforms partnering with galleries have become a key focal point for buyers to communicate and make purchases. Important companies in this sector include 1stDibs, Artsy, Lofty-Auction Mobility, eBay, and Amazon Art, as well as new entrants Arteby's (focused on low-value, high-volume sales) and Art and Only (focused on high-value sales and offering global physical viewing locations). These sites all offer works for sale across a broad range of categories and employ a range of different revenue models (including seller commission, listing fees and others).

In 2016, the fine and decorative online marketplace Lofty.com was acquired by Auction Mobility to create cross-selling opportunities and allow access to Auction Mobility's auction software. The acquisition enables Auction Mobility's auction house clients to publish their catalogues both via their own white-labeled platforms provided by Auction Mobility, as well as to the Lofty.com marketplace.

One of the largest gallery platforms in the sector is Artsy, which in 2016 hosted 4,000 galleries, 600 museums and institutions, 60 international art fairs, and select auctions. Artsy's base of subscriber galleries doubled over 2016, with the company reporting buoyant sales activity via the platform including multiple sales for six-figure sums. While it is difficult to ascertain exactly which specific introductions result in immediate or future sales for galleries, known or established sales on Artsy grew by more 120% year-on-year and the inventory for sale increased by 150%, reaching over 300,000 for-sale works at the start of 2017.

8%

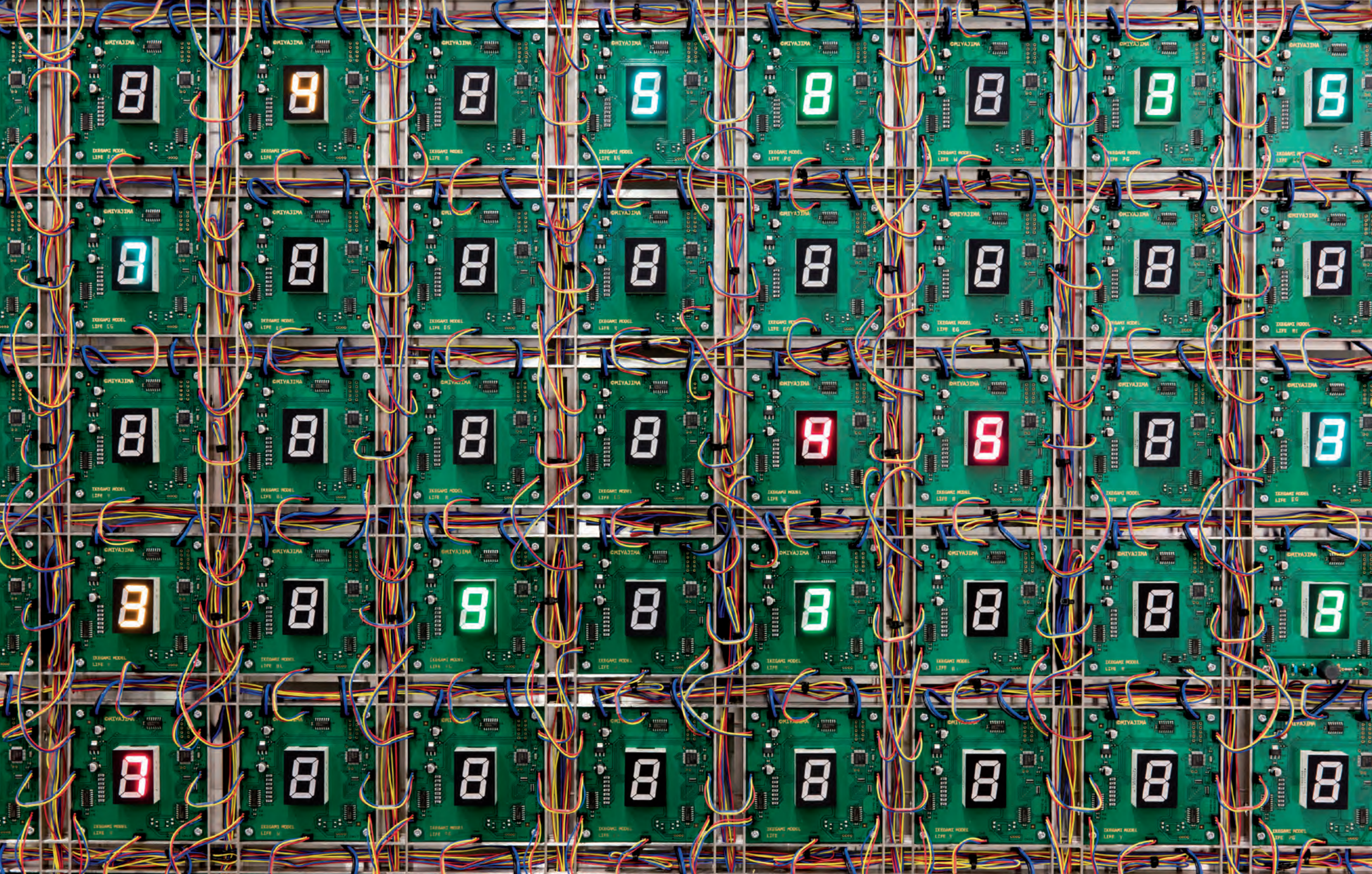
In the dealer sector in 2016, online sales represented an average of **8% of their total sales,** up 1% year-on-year.

In 2016 Artsy launched live auction technology with some of their auction partners, including Sotheby's, Phillips, and Koller, hosting more than 40 auctions and with multiple works selling for over $100,000. These Artsy-hosted auctions were designed to create a pipeline to saleable property, while providing the traditional auction houses with superior technology capabilities and access to Artsy's audience of young and emerging collectors. The company plans to host more than 150 auctions in 2017.

Artsy has also focused on growth in its editorial and news services and was the fastest growing arts-focused publication in 2016, covering a broad range of editorial and features related to art. Other platforms, such as Ocula, pursue a more focused strategy with a strong emphasis on information on galleries and artists from the Asia-Pacific region. Ocula's private sales and advisory division saw an increase in transactions of 56% in 2016, with collectors from key markets such as Taiwan and South Korea strongly driving sales.

Online sales have become an important method of **reaching new customers,** with over half (56%) of the online sales generated by dealers made to new clients.

Apart from the traditional businesses selling online, there are also a number of online retailers ("1P" or first-party retailers) and auction platforms selling on their own account. Some of these businesses, although still coming from a relatively low base, have continued to show strong growth in sales and revenues despite the downturn in the aggregate market.



4.5 | The Wider Online Sector

In the online auction sector, a number of companies have emerged providing curated, branded online auctions across a range of art and collectibles. Although prices vary, most of these companies achieve average sale prices in the range of $3,000 to $5,000, with items for sale often sourced from individual consignors and marketed as part of a curated auction or buy now sale according to specific themes.

Paddle8 and Auctionata, two of the key players in this sector, announced in May 2016 that they were to merge. Both companies had focused on the middle sector of the market, but Auctionata had concentrated on European sales of watches, collectibles and antiques via live streamed auctions, while Paddle8 had a strong North American brand with curated auctions and benefit sales of Contemporary art.

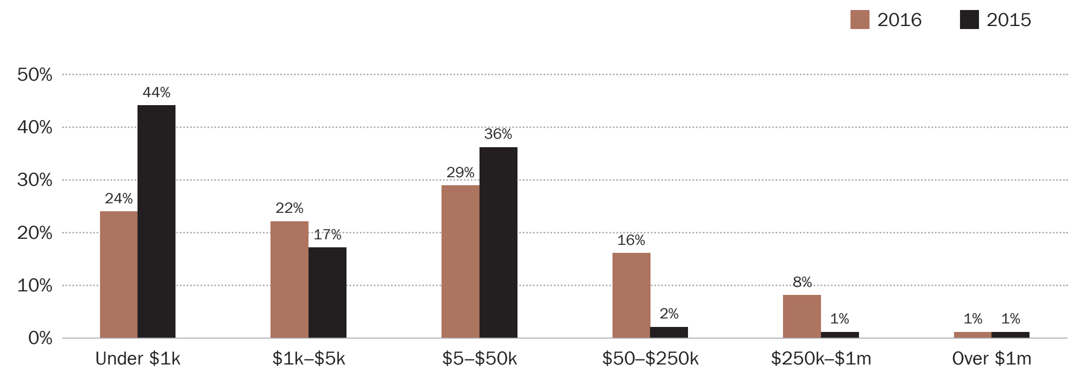
75%

According to the companies surveyed, 24% of their transactions were at prices below $1,000, and 75% were for **less than $50,000.**

In 2015, the two companies reported combined sales of over $150 million, with 800,000 registered users in 200 countries and over 200 employees. Although this merger made the new combined company the largest in this space in 2016, by early 2017 the partnership had run into difficulties, with Auctionata filing for insolvency in January and subsequent attempts by investors to buy out Paddle8 from the combined venture. Neither company has released aggregate results for 2016 and, like many other companies in the online sector, do not publish sales results from their public auctions online, which has made detailed analysis of transactions in the sector more difficult.

Performance across all of these different companies varied in 2016. According to a survey of a sample of about 50 online companies in 2016, the majority of auction and retail platforms reported stable sales values, while several of the 1P retailers showed positive growth. Companies in the sector generally remained optimistic about future sales and revenues, with 88% of respondents estimating that sales would be higher in 2017, including 50% who thought they would be significantly higher.

Figure 4b | Volume of Sales of Online Companies by Price Level



© Arts Economics (2017)

Although there were examples of individual higher priced works sold during the year, most sales in the online market remain at a relatively lower price level. According to those companies surveyed, 24% of their transactions were at prices below $1,000 (down 20% on survey results in 2015), and 75% were for less than $50,000. The largest single segment was sales between $5,000 and $50,000, and less than 1% of items sold in 2016 were for more than $1 million.

About 43% of respondents reported that sales between $1,000 and $5,000 had been the most profitable for them in 2016, with a further 29% opting for the higher level of $50,000 to $250,000.

4.6 | Website Traffic and Social Media

The main challenges cited by the majority of online companies over the next five years were much the same as traditional art businesses and were centered on finding new clients, stimulating demand and accessing supply. Some noted that buyers were increasingly comfortable purchasing online, but that supply and inventories remained the key challenge, and 45% of respondents cited accessing supply as one of their top challenges in the next five years. Around one-third also cited the increased regulation of the market as a key issue going forward, as well as transport, shipping and logistics.

An overarching challenge for all of the companies in the online space continues to be securing more website traffic. Table 4a shows some of the key indicators for a selection of the main sites involved in e-commerce in the art and antiques market in 2016.[25]

By far the highest ranked sites in terms of traffic are the giant 3P marketplaces such as Amazon and eBay, both with over 1 billion visitors a month, which explains their appeal for partnerships in the auction sector. However, these rankings are based on their visitors across all categories, including art and antiques alongside many other products. The highest global rankings for an art-specific e-commerce site was the 3P platform 1stDibs (with 2.7 million visitors per month). Others ranked highly were the auction consolidator liveauctioneers.com, art.com (which includes posters and non-original prints), Artnet and Artsy.

While traffic rankings give an indication of popularity, it is important to note that some sites with relatively low visitor numbers are not necessarily less successful, but are built on a more exclusive or niche business model, targeted at attracting only specific visitors rather than higher volumes. Many companies in the sector have also pointed out that while they have seen huge increases in visitor traffic to their sites, the key challenge is how to increase engagement and convert them to active buyers, which often remain a small proportion of visitors.

As in 2015, Christie's ranked highest among the bricks-and-clicks category with 1.3 million visitors, followed by Heritage Auctions. However, both of these major houses had less traffic than some of the major auction consolidators, including the-saleroom.com (with 2.2 million visitors) and Invaluable (with 1.6 million).

User engagement is another important measure, establishing how long visitors stay on sites and how many pages they visit once there. Some of the auction consolidators such as drouotlive.com, auctionzip.com and bidspotter.com ranked the highest in terms of the amount of time visitors spent on their sites, while artfinder.com was also among the top 3P marketplaces. As in 2015, Lauritz scored the highest in terms of time spent and pages viewed among the bricks-and-clicks, with higher results than the major auction houses such as Christie's and Sotheby's. Auctionata had the deepest user engagement, with visitors spending more than twice the amount of time on the site versus Artnet or Paddle8.

Social media has been well-established as a critical part of building brand awareness for the many new companies in the art market. Instagram in particular has become the key social media tool for discovering and sharing art, especially for relatively younger collectors. It has also been lauded as a direct sales generation tool for both online and offline agents in the market. Although relatively easy to manipulate, metrics on followers can offer some insight into the use and involvement in social media of the companies in this sector. Gagosian, Sotheby's and Artsy were the three leading art-specific e-commerce companies in terms of popularity on Instagram. Sotheby's was also among the top sites on Facebook, although just below seditionart.com, the retailer focusing on digital editions of contemporary art. Perhaps unsurprisingly, given their news content, Artnet and Artsy rated the most highly on Twitter.

Considered over time, website traffic and other metrics all point to a steadily increasing interest in buying art online. The growth of companies in the online art space has been one of the most visible trends in the art market over the past decade. E-commerce has gained significant momentum, creating increased convenience, efficiency and accessibility for buyers and sellers, with much greater speed of transactions and wider global reach.

2.7 m

The highest global rankings for an art-specific e-commerce site was the 3P platform **1stDibs** with 2.7 million visitors per month.

25 Traffic statistics are from SimilarWeb, one of the main web analytics databases. Databases such as SimilarWeb and Alexa have a number of measurement and accuracy issues and show a snapshot at a point in time only (extracted in December 2016). It is important to note that some of these indicators change rapidly. Social media statistics are taken directly from the source on social media (and not from these databases).

Table 4a | **Website Metrics: Selected Companies in 2016**

a. 1P Retail	Global rank	Monthly Traffic	Page views per user	Bounce rate	Time on site (minutes)	Twitter followers	Instagram followers	Facebook likes
20x200.com	523,155	52.1k	3.0	32%	02:02	24,900	5,490	29,189
art.com	18,244	1.9m	5.8	52%	03:38	27,725	9,646	364,841
artandonly.com	7,389,445	1.2k	1.5	81%	00:04	661	3864	3,236
artists.de	551,077	42.8k	3.1	62%	01:22	—	—	3,546
artspace.com	135,737	370.8k	1.8	69.%	01:09	164,001	168,190	77,327
artstar.com	1,672,478	7.2k	4.5	44%	02:39	1,738	4,560	3,037
artuner.com	2,524,184	3.8k	4.6	38%	04:47	9,040	5,168	4,688
blindspot.com	6,005,685	1.0k	3.7	78%	02:07	6,701	—	8,663
collectionair.com	6,086,532	795	6.7	80%	04:11	433	713	1,849
exhibitiona.com	907,649	39.9k	1.8	47%	01:12	5,175	65,900	4,421
eyestorm.com	1,463,114	22.8k	1.5	31%	00:21	1,833	1,804	3,400
gagosian.com	235,949	146.9k	2.2	41%	01:12	253,741	586,871	147,357
lumas.com	279,882	85.9k	5.8	31%	04:58	9,576	19,568	164,738
seditionart.com	879,839	43.3k	1.9	50%	00:56	3,664	2,763	472,625
thegreyarea.com	5,924,142	1.3k	2.5	45%	03:58	1,526	5,274	3,207
b. 3P Retail Marketplace								
1stdibs.com	14,997	2.7m	4.7	57%	03:30	19,404	302,043	59,588
amazon.com	8	2.9b	10.6	37%	06:51	3,275	—	27,111,203
artfinder.com	60,910	567.2k	6.5	33%	07:24	91,388	21,056	258,561
artsation.com	3,499,184	5.3k	1.6	38%	01:34	1,793	269	26,688
artsper.com	164,799	158.3k	5.2	47%	04:06	9,022	9,207	121,705
artsy.net	21,496	2.4m	3.1	49%	03:02	292,256	402,724	293,504
artviatic.com	15,607,548	342	1.1	86%	00:04	15,389	—	4,706
ebay.com	25	1.2b	9.1	34%	06:52	623,796	254360	9,467,567
etsy.com	130	218.7m	7.7	43%	05:51	2,699,145	1,227,255	2,682,013
lofty.com	527,802	60.5k	2.9	27%	05:12	1,537	530	16,797
ocula.com	650,211	51.1k	1.6	66%	00:37	3,505	30,755	55,089
saatchiart.com	24,883	1.5m	6.4	47%	05:39	182,529	204,801	415,642

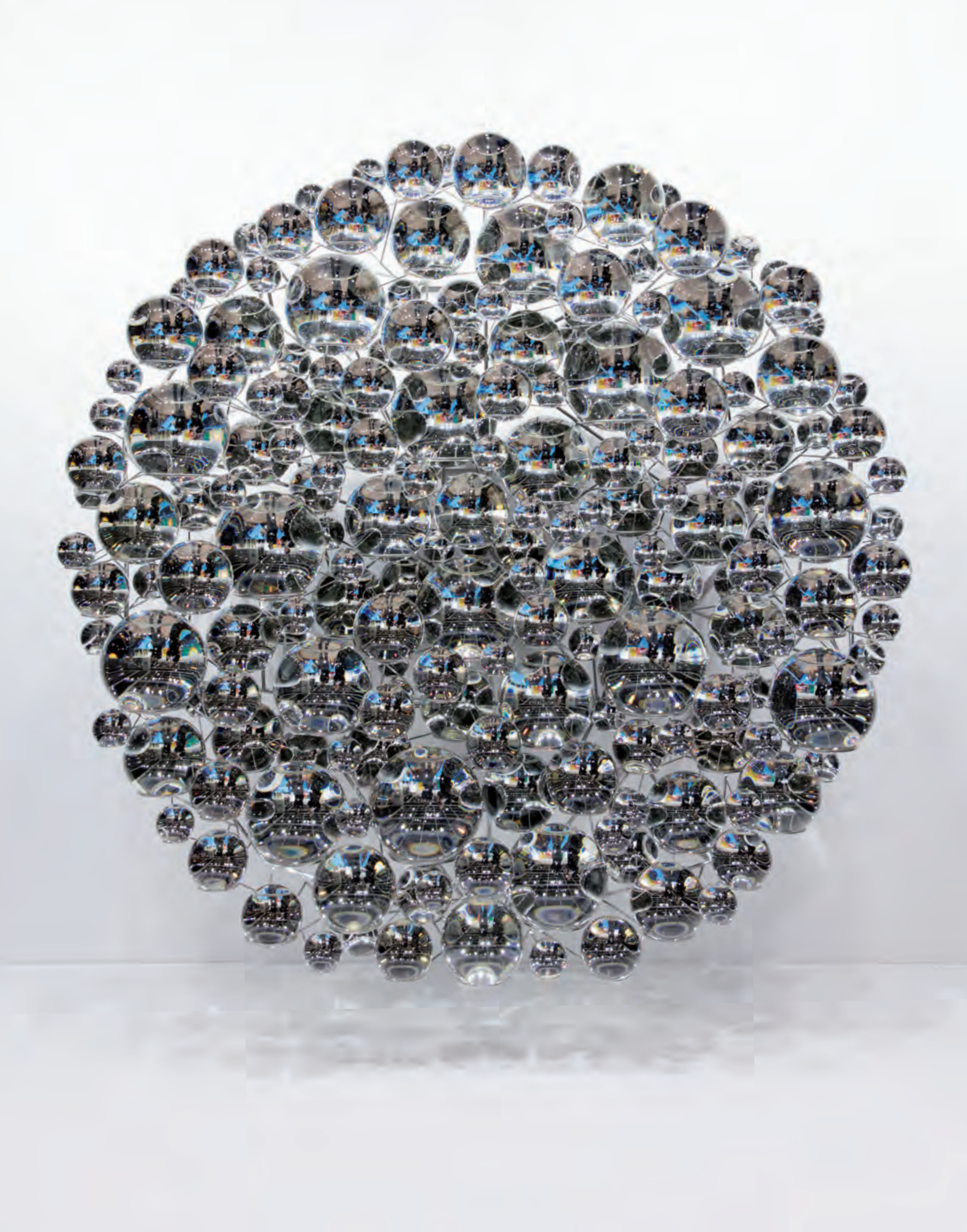
c. Auctions	Global rank	Monthly Traffic	Page views per user	Bounce rate	Time on site (minutes)	Twitter followers	Instagram followers	Facebook likes
i. Bricks and Clicks								
bonhams.com	70,545	587.5k	3.71	54%	03:09	34,962	21614	12,111
christies.com	29,149	1.3m	3.57	59%	02:42	96,098	258,025	4,717
ha.com	30,043	1.2m	5.44	44%	04:51	56,691	—	53,843
lauritz.com	30,991	815.9k	11.4	22%	06:09	277	4,732	31,863
phillips.com	207,854	165.8k	2.9	55%	02:16	35,433	94,339	24,799
sothebys.com	37,947	1.0m	4.7	51%	03:54	86,481	413,195	431,214
ii. Online-Only								
artnet.com	18,259	2.5m	3.67	55%	01:54	1,583,228	391,821	206,700
artprice.com	51,813	622.8k	6.12	39%	03:53	26,006	—	302,521
auctionata.com	113,825	236.2k	6.59	53%	05:36	6,107	3,595	38,873
paddle8.com	180,060	175.9k	3.34	37%	01:49	39,935	58,908	38,528
iii. Consolidators								
auctionzip.com	7,777	3.1m	15.5	24%	08:02	4,369	—	33,391
barnebys.co.uk	319,525	242.6k	1.51	70%	00:41	1,506	10,658	25,459
bidspotter.com	75,598	357.3k	7.91	23%	07:47	1,495	33	2,232
drouotlive.com	173,663	87.0k	17.24	22%	32:04	6,685	10,330	86,852
igavelauctions.com	720,664	17.2k	7.59	34%	03:59	807	552	1,267
invaluable.com	22,352	1.6m	5.07	49%	03:53	2,805	1,863	45,938
liveauctioneers.com	17,272	1.9m	7.55	40%	04:34	2,079	689	13,913
lotprive.com	663,508	40.5k	2.37	44%	01:28	357	—	3,888
lottissimo.com	73,719	270.6k	12.81	31%	07:31	34	—	664
the-saleroom.com	21,720	2.2m	7.53	35%	06:18	4,901	87	4,862

© Arts Economics (2017) with data from Similar Web, Alexa, Facebook, Twitter and Instagram. Data measured in December 2016.

Despite the emergence of many new companies over the last ten years, the level of sales is still relatively low compared to offline art sales. The survival of many online companies has been dependent on significant injections of capital investment, which indicates, in some cases, both the continued confidence of some investors in the future of the space and, as yet, the lack of consistent or sufficient revenue streams by these new entrants. Although the frenzy of activity in the online sector of the art market had subsided to some extent in the last two years, 2016 did see the arrival of new entrants and increased partnership and mergers and acquisitions activity, both successful such as the acquisition of Lofty by Auction Mobility, and markedly less so in the case of Auctionata and Paddle8.

While the future of some companies is uncertain and growth has been slower than first anticipated, the online sector remains a relatively bright spot in the otherwise declining art market. The internet continues to revolutionize communications in the art sector, allowing art and information to be accessed continuously and globally, and, aside from e-commerce, will remain a critical medium for the market's expansion in future.

While the future of some companies is uncertain and growth has been slower than first anticipated, the online sector remains a relatively bright spot in the otherwise declining art market.

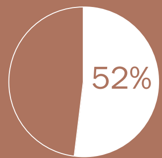


Art Sectors

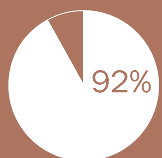
5

Key Findings

Art Sectors



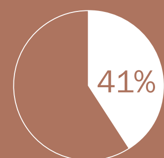
The largest sector of the fine art market in 2016 was Post War and Contemporary art, accounting for 52% of the market by value and 37% of transactions.



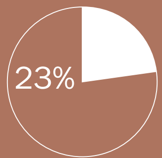
Post War and Contemporary art was also the most exhibited worldwide, accounting for a share of 92% of the number of exhibitions in 2016, with 80% relating to artists born after 1945.

↓18%

After peaking at just under $8 billion in 2014, the Post War and Contemporary sector has experienced two years of declining sales, with values falling 18% in 2016 to $5.6 billion, alongside a 12% drop in the number of transactions.



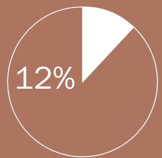
Living artists accounted for 41% of the value of sales in the Post War and Contemporary sector in 2016 and half of the lots sold. Sales in this sub-sector decreased 7% year-on-year to $2.3 billion.



Modern art remained the second largest sector of the fine art market, accounting for 23% of the value of sales and 29% by volume.

↓43%

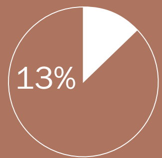
Sales of Modern art at auction fell by 43% in 2016 to $2.6 billion, with declines in all of the major markets, while the number of transactions decreased by 6% year-on-year.



The Impressionist and Post-Impressionist sector represented 12% of the value and 18% of the total lots sold in the fine art auction market in 2016.

↓31%

Sales of Impressionist and Post-Impressionist art fell by 31% in 2016 to $1.3 billion, while the volume of lots sold increased by 13%.



The Old Master sector accounted for 13% of the value of the fine art auction market in 2016 and 16% of the number of transactions.

↑5%

Sales in the Old Master sector increased 5% year-on-year to $1.4 billion, with the volume of lots also increasing by 12%. The European Old Master sector also saw an increase in sales of 6% to $594 million.

5.1 | The Fine Art Market

A key feature of the global art market is that it is made up of the aggregation of a number of unique and independent sub-markets that can be defined by artists, periods and genres, and whose combined performance influences all of the global trends discussed in Chapter 1. These sectors have each developed at their own pace, with different price and sales performance year-to-year.

While major macro-economic forces and significant external events have tended to affect all sectors, in certain periods the performance of these sub-markets has diverged and their trajectories of growth have not been correlated. The global financial crisis had a profoundly negative effect on nearly all sectors of the market in 2009. However, since then the recovery of different market sectors has been uneven. Fine art sales have led the recovery and, within fine art, the Modern and Contemporary sectors showed the highest growth and, despite mixed performance in 2016, remained the largest sectors by value.

While the dealer surveys discussed in Chapter 2 help to inform research on the trends within the market, precise analysis of prices and individual sales within sectors of the art market relies primarily on auction data, which provides the only large-scale, global and publicly available information on individual transactions. Even though most auction data is in the public domain, aggregating data within this part of the market is not without issues, particularly on a global scale, with some companies publishing limited, selective or no results at all. To ensure the most comprehensive and consistent analysis of the art market sectors, therefore, one central art price database, Collectrium is primarily used. Collectrium's database covers 5,600 auction houses, with consistent auction results gathered annually for 1,300 businesses in 53 countries. The database gathers 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 and sales.[26]

As noted in Chapter 1, one of the key drivers of the boom in the art market up to 2007 and in its recovery from the contraction of 2009 has been fine art. This segment has dominated decorative art and antiques in terms of value for more than ten years, and is where most of the higher priced works of art have been sold, both at auction and in the dealer sector. Within the fine art market, however, performance has varied. The Impressionist and Modern sectors led the market in the 1980s and early 1990s and the Contemporary sector was small and perceived as a highly risky, with a relatively small segment of dealers and less conventional collectors. However, during the 1990s, and particularly in the last ten to 15 years, the popularity of Contemporary art has rocketed and prices in the sector have increased significantly. The fine art market is now heavily dominated by Modern and Contemporary art, both in terms of value and volume of sales.

Table 5a shows that in 2000, Modern and Contemporary art accounted for less than half of the overall value of the fine art market, with a combined share of 48%, and the Modern sector was the significantly larger of the two (with 31%). The combined share of these two sectors increased rapidly since that point, particularly during the boom of the market from 2004. Although it dipped in 2009 as Post War and Contemporary art suffered a disproportionately large decline in sales in the fallout from the global finance crisis, their combined share has been above 70% since that point, and reached 75% in 2016.

Table 5a | Market Share by Value of the Fine Art Auction Market:[27] 2000–2016

Year	Post War and Contemporary	Modern	Others
2000	17%	31%	52%
2006	34%	36%	30%
2007	44%	29%	27%
2008	45%	29%	26%
2009	32%	35%	33%
2010	35%	36%	29%
2011	38%	34%	28%
2012	44%	32%	24%
2013	46%	30%	24%
2014	49%	28%	23%
2015	47%	31%	22%
2016	52%	23%	25%

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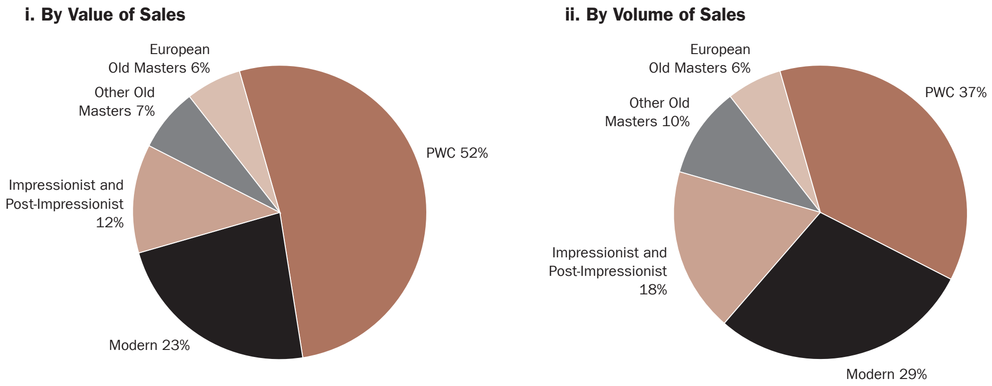
26 Some auction houses do not share results with Collectrium and are included manually or excluded. Those excluded from the analysis are all small auction houses representing mainly low value sales, which do not significantly affect aggregate trends in the overall market.

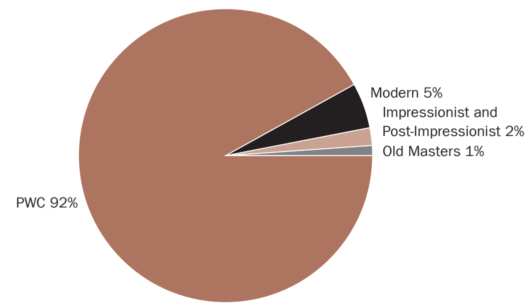
27 The shares in this table and throughout the chapter indicate the share of these sectors out of the four main sectors of the art market: Post War and Contemporary, Modern, Impressionist and Post-Impressionist and Old Masters, including European Old Masters. It excludes the small amount of transactions that cannot be classified within these distinct sectors.

Figure 5a | Market Share by Sector of the Fine Art Auction Market in 2016



Fine art sales have led the recovery and, within fine art, the Modern and Contemporary sectors showed the highest growth and, despite mixed performance in 2016, remained the largest sectors by value.

Figure 5b | Global Share of Exhibitions by Sector in 2016



While the Modern art market was the larger of the two sectors for many years, since 2007 Post War and Contemporary art has been the larger of the two by value for most years (with the exception of 2009 to 2010 in the aftermath of the recession). The share of the Post War and Contemporary market peaked in 2016, while the Modern market declined to its lowest share in ten years.

Within the art trade there are many different definitions of the various sectors of the market. To consistently analyze sales performance, it is therefore necessary to delineate the sectors based on specific criteria, which include an artist's date of birth, the date of creation of their works and also the importance of artists to a particular movement.

For this analysis by sector, the following definitions are used[28]:

a. Post War and Contemporary, defined as artists born after 1910.
b. Living artists, defined as artists alive in 2016, which are analyzed as a sub-set of the Post War and Contemporary sector.
c. Modern, defined as artists born between 1875 and 1910.
d. Impressionist and Post-Impressionist, which are defined as artists born between 1821 and 1874.
e. Old Masters, defined as artists born between 1250 and 1821.
f. European Old Masters, defined as Old Master artists of European origin, which are analyzed separately as a sub-set of the Old Master sector.

In 2016, the largest sector of the fine art auction market by value was Post War and Contemporary art, accounting for 52% of the market, up 5% in share year-on-year, and reaching its highest ever share of total sales values. Modern art was second largest with 23% down 8%.

Post War and Contemporary art was also the largest sector in terms of the number of lots sold at auction, with a share of 37% (down 8% in share on 2015), while Modern was stable year-on-year with 29% of total lots sold.

The Old Master sector increased its share in the value of sales by 4% to 13%, slightly surpassing the Impressionist and Post-Impressionist sector. Both sectors experienced an increase in the share of the volume of lots sold, with the Old Master sector up 5%, driven by its increasing share in the non-European segment.

It is interesting to note that the dominance of Post War and Contemporary art is not confined to auction sales. Artfacts.net data on the number of exhibitions held in 2016 by sector reveals that Post War and Contemporary art was also the most exhibited worldwide, accounting for a share of 92% of the number of exhibitions. This share has not changed significantly in ten years, accounting for 90% in 2006 when Modern was slightly higher at 7%.

Of the exhibitions carried out in the Post War and Contemporary sector, almost 80% relate to artists born after 1945, indicating the importance of recent and living artists in the exhibition activity of this sector.

28 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.

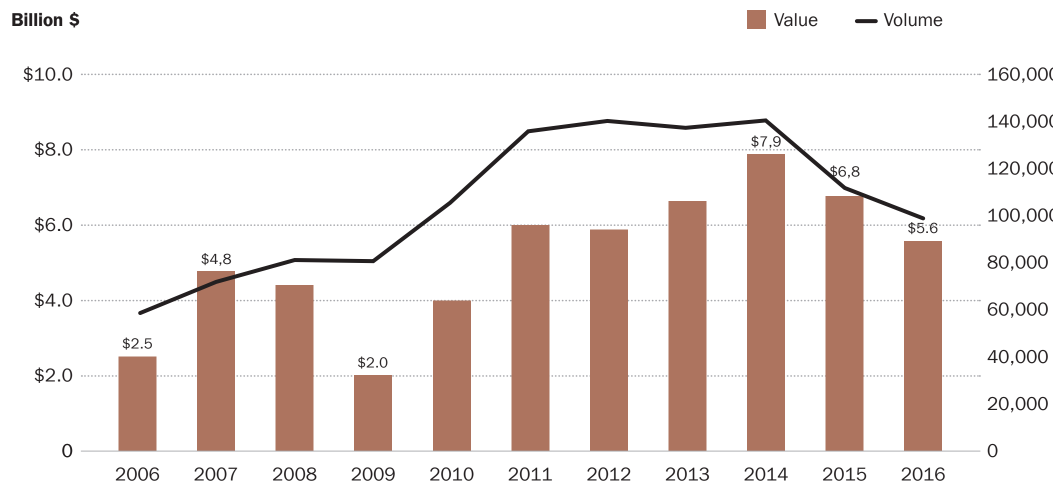
5.2 | Post War and Contemporary Art

Post War and Contemporary art was the largest sector of the fine art market in 2016, with 52% of its value and 37% of the lots sold. Sales reached a total of $5.6 billion in 2016, a decline of 18% year-on-year, the second year of decreasing values since the peak in the market in 2014.

Post War and Contemporary art sales had boomed up to 2007, with auction values rising by more than 450% from 2003, alongside a steady increase in the number of works sold at auction. The rapidly escalating values and relative liquidity compared to other sectors drew interest from more speculative and investment-driven buyers, which helped to drive its boom, but also contributed to it being one of the hardest hit during the financial crisis. Sales in the sector plummeted by 58% in value in the two years to 2009, as prices and the supply of high quality works on the market fell. The market bounced back quickly and strongly, however, and with five years of nearly consistent growth it reached a historical peak of $7.9 billion at auction in 2014. Unable to keep up the momentum, the market slowed in 2015, with sales falling 14% in value. The further decline in values in 2016 has brought the market to 28% below its 2014 peak. However, sales over ten years have still grown by over 120%, and market values have recovered by more than 180% since their low of 2009.

The volume of works sold also declined in 2016 (by 12%), also the second year of falling sales, leaving the number of transactions 30% below their peak in 2014. The rate of buy-ins in the sector was relatively low at 22% (versus 33% in the wider fine art market). Works that sold during the year also tended to sell within their estimated valuation ranges. 39% of the lots sold were within their presales estimate range and 36% sold above estimates, with the latter accounting for the majority of sales by value at 55%. A share of 24% of lots sold below their estimates and these accounted for just 4% of the market's sales values. This indicates to some extent that the majority of the works brought to auction sold reasonably well (or as expected), and that the decline in the market was very much supply-driven.

Figure 5c | The Post War and Contemporary Art Sector: 2006–2016



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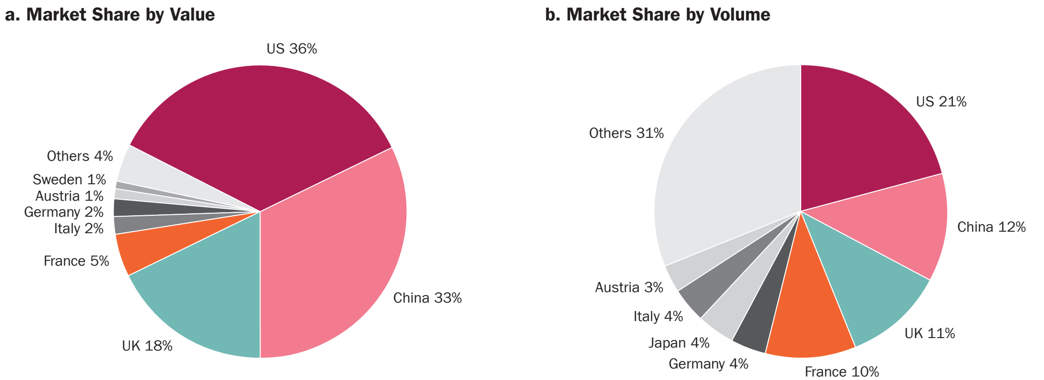
Post War and Contemporary art was the largest sector of the fine art market in 2016, **with 52% of its value and 37% of the lots sold.**

Figure 5d | **Market Share of the Post War and Contemporary Sector in 2016**



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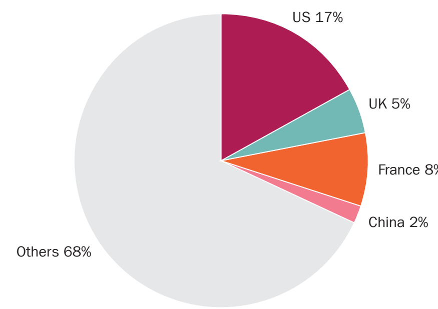
In 2016, while the US remained the largest center worldwide for sales of Post War and Contemporary art, its global share was eroded significantly, falling 11 percentage points to 36% by value. The main gains were in the Chinese market, which increased its share by value by 17%, making it the second largest market in this sector, with one-third of the value of sales, its highest share since 2011. The UK lost three percentage points, falling to 18% and third in the global ranks, while fourth place France edged up 1%.

The US also had the highest share of transactions at 21%, down 2% year-on-year, while China, in second place accounted for 12%, stable on 2015.

The EU as a whole accounted for 27% of the value of sales in the sector, down 3% year-on-year and the UK's share of the total EU market was 65%. The share of the EU in this sector has fallen by 19% since its peak in 2008 when it reached 46%. The EU accounted for a larger share of the number of transactions globally in 2016 at 45%, although these were also down slightly by 2% year-on-year.

Figure 5e | **Global Share of Exhibitions in the Post War and Contemporary Sector in 2016**



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Looking again at exhibition data, the US also led with the largest number of exhibitions globally in this sector in 2016. However, its share is much less dominant than at auction, accounting for just 17% of the total number of exhibitions. This has not changed significantly in the last ten years, falling slightly (by 3%) since 2006 as exhibitions have become more globally diverse.

The global share of sales from the four largest art markets in this sector exceeded 90% by value in 2016 and a smaller share of 54% of lots sold at auction. However in the exhibition sector, there is much greater international dispersion, with these top markets accounting for just 32% of total exhibitions in 2016.

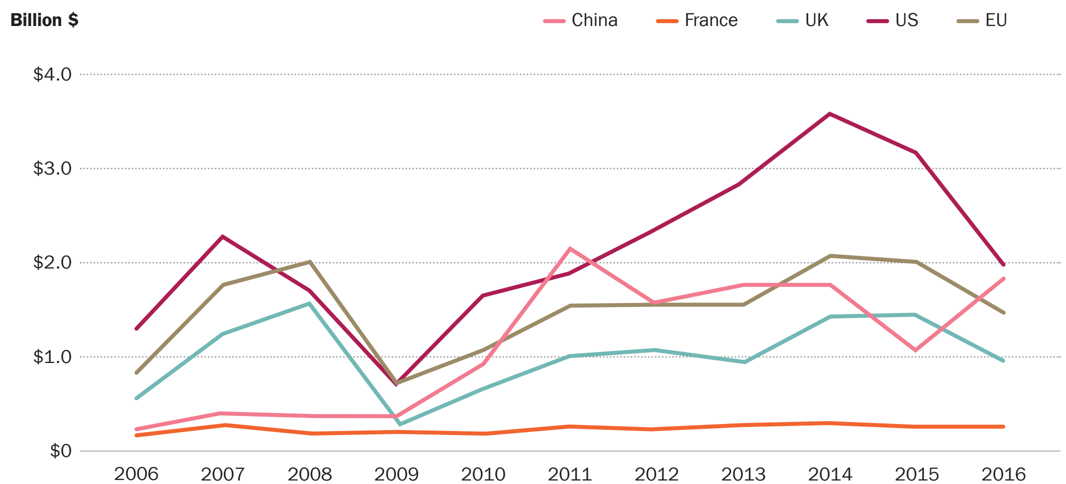
The global share of sales from the four largest art markets in the Post War and Contemporary sector **exceeded 90%** by value in 2016, however they accounted for just **32% of total exhibitions.**

After five years of very rapid growth from 2010 to 2014, sales in the US fell for the second year in a row in 2016. The US market reached sales of just over $2.0 billion, a 37% decline in values year-on-year and 44% less than their historical peak of $3.6 billion in 2014. Despite this negative trend in 2015 and 2016, sales have advanced nearly 180% since the market recession in 2009 and have increased 51% in the decade from 2006 to 2016. Although sales in the US have been volatile, their average annual growth rate over ten years is still a substantial 19%.

After a significant decline of nearly 40% in 2015, sales in China recovered in 2016, increasing 68% to reach $1.8 billion. Sales in the sector are still 16% less than the peak in the market in 2011, when China was temporarily the largest market for Post War and Contemporary art globally with sales of $2.2 billion. Over the long term sales have grown substantially, increasing to almost eight times their size in the ten years from 2006 to 2016, and averaging annual growth rates over the period of almost 40%.

Sales in the UK also reversed the positive trend of the two previous years, with a decline of 32% to $976 million, bringing the market back to levels just under those of 2011. Although the market is still at a considerably lower level than its $1.6 billion peak in 2008, sales have increased by more than 200% since 2009 and 75% over the decade from 2006. French sales, on the other hand, increased slightly (by 1%), although the recovery of values since 2009 has been more subdued than the UK, advancing just 30%. With its major market dragging on growth, the net performance of the EU as a whole was negative, with sales contracting 26%.

Figure 5f | **Sales in the Post War and Contemporary Sector 2006–2016: Key Markets**



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Average prices in this sector declined 4% year-on-year, with substantial double-digit declines in the major markets of the US and UK, while those in France and China rose. Many of the highest priced works sold at auction in the last five years have been in the Post War and Contemporary sector which, along with Modern art, has become the most associated with multi-million dollar prices at auction. However, in 2016, as in previous years, the bulk of transactions are at much lower levels. In 2016, 87% of works that were sold at auction in this sector were priced below $50,000 with the majority (66%) priced at less than $5,000. These transactions only made up 13% of the sector's

Figure 5g | **Sales by Price Bracket in the Post War and Contemporary Sector in 2016** [29]

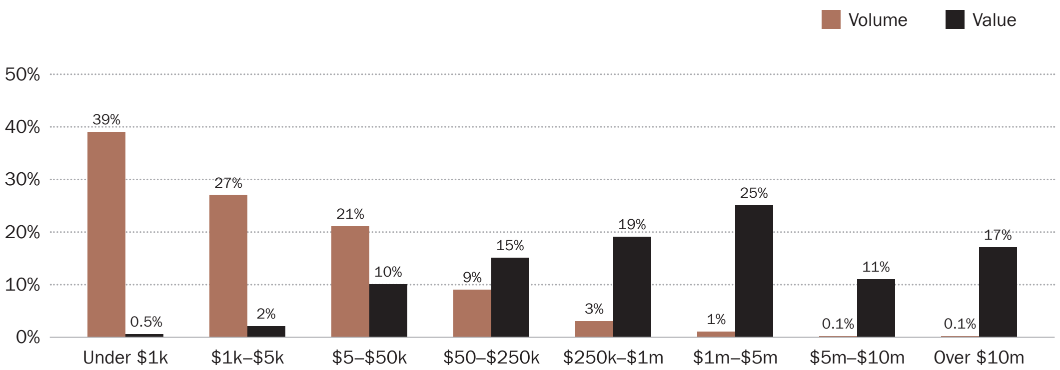
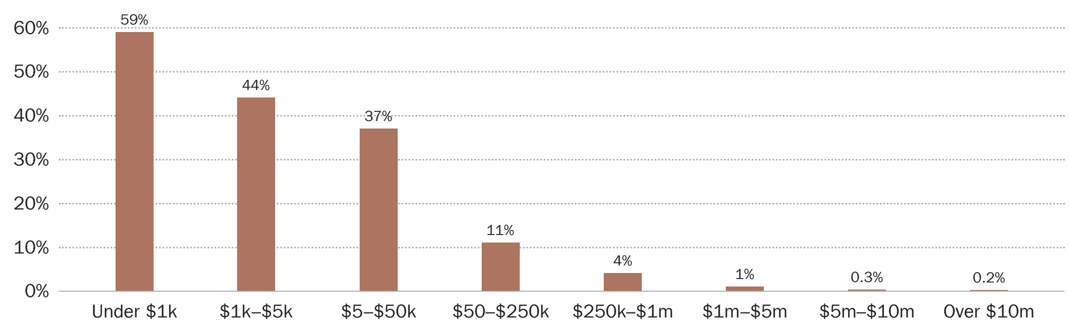


Figure 5h | **Share of Artists by Price Segment in the Post War and Contemporary Market in 2016**



aggregate value, which remained highly dominated by the top end of the market. Sales exceeding $50,000, on the other hand, accounted for 87% of the sector's value in just 13% of lots sold.

Works priced at over $1 million accounted for the majority (54%) of value in 2016 in less than 1% of lots sold. While in 2016 the largest segment by value was sales in excess of $10 million (with a 28% share), this sector only accounted for 17% of the value of works sold in 2016. The number of works sold for more than $10 million fell 41%, more than twice the decline of total lots in the sector, and substantially more than the 7% drop in the wider segment of prices over $1 million. Similarly, sales values in the highest segment over $10 million declined 49%, three times the rate of decline of the aggregate sector and double the drop of the wider $1 million-plus segment. These figures strongly indicate a cooling of the highest end of this sector in 2016, with significantly fewer works being sold at the highest prices, along with lower prices for those that did sell compared to other recent years.

As noted in Chapter 3, the auction market has become highly focused in terms of sales values on a very small number of artists who achieve the highest prices. In 2016, there were 13,330 artists who had works selling in the Post War and Contemporary sector at auction. However, only a very small proportion of 1% had sales in excess of $1 million. Most artists in this sector had works selling for less than $50,000, with the majority (59%) having works sold that were priced at less than $1,000.

29 Note that many of the percentages here and throughout the chapter are rounded to the nearest whole number (unless shown with more than one decimal place). Totals therefore may not exactly sum to 100%.

The highest selling artist in 2016 was Chinese Contemporary painter Wu Guanzhong, with sales of just under $196 million, and one work in the top 20 lots sold in the sector. Gerhard Richter was the second highest selling artist with $187 million in total sales and four works in the top 20 highest priced lots of the year. These two artists replaced Andy Warhol, who was the top selling artist of the last two years (and whose share dropped to just less than 3% of the market in 2016). The top 20 artists in this sector accounted for 31% of the value of total sales (from 45% in 2015), despite only accounting for only 3% of the lots sold. 14 of the artists in the top 20 were also in the top 20 in 2015, with just six new entrants to the list.

Table 5c offers, in contrast, the top 20 exhibited artists in 2016. Exhibition rankings are based on Artfacts.net proprietary ranking methodology. Although the number of exhibitions an artist features in is included in the ranking estimation, Artfacts.net also ranks artists using qualitative and quantitative criteria that accords greater weight to some institutions than to others based upon subsets of metadata. This allows the quality of the exhibition, and a range of other factors related to the artist's influence and international reach to be factored into the ranking, rather than depending solely on the number of exhibitions.[30]

According to these rankings, the top artist in this sector in 2016 was Andy Warhol, who had 180 major exhibitions during the year, followed by Bruce Nauman and Gerhard Richter. Richter and Warhol are the only two artists in the top 20 who also appear in the top 20 artists by auction sales in Table 5b. The overlap in 2015 was slightly higher (four artists), but there were just two artists in 2014, and generally a low cross-over in the last ten years. The results indicate that there are some significant differences in an artist's position in the auction market and their artistic "importance" as measured by their current public presence, exhibition status and appreciation by the public, museums and the art trade.

The highest priced work auctioned in 2016 was Willem de Kooning's *Untitled XXV*, which sold at Christie's in New York $66 million. There were four Chinese artists included in the top 20 works sold in this sector, with the highest lot being Cui Ruzhuo's *The Grand Snowing Mountains*, which sold for just under $40 million at Poly Auction in Hong Kong.

30 See the Appendix for a full explanation of Artfacts.net ranking process.

Table 5b | Top 20 Selling Post War and Contemporary Artists in 2016

Rank	Artist	Share of Value	Share of Volume
1	Wu Guanzhong	3%	0.17%
2	Gerhard Richter	3%	0.23%
3	Jean-Michel Basquiat	3%	0.08%
4	Andy Warhol	3%	1.09%
5	Willem de Kooning	2%	0.10%
6	Alexander Calder	2%	0.33%
7	Jean Dubuffet	2%	0.17%
8	Cui Ruzhuo	1%	0.05%
9	Francis Bacon	1%	0.05%
10	Cy Twombly	1%	0.07%
11	Zao Wou-Ki	1%	0.26%
12	Yayoi Kusama	1%	0.34%
13	Richard Prince	1%	0.04%
14	Roy Lichtenstein	1%	0.38%
15	Christopher Wool	1%	0.03%
16	Clyfford Still	1%	0.00%
17	John Panting	1%	0.02%
18	Jeff Koons	1%	0.04%
19	Mark Rothko	1%	0.01%
20	Alberto Burri	1%	0.03%
Others	Others	69%	97%

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Table 5c | Top 20 Exhibited Post War and Contemporary Artists in 2016

Rank	Artist	Number of Exhibitions
1	Andy Warhol	183
2	Bruce Nauman	56
3	Gerhard Richter	84
4	Joseph Beuys	95
5	Cindy Sherman	56
6	John Baldessari	57
7	Sol LeWitt	87
8	Ed Ruscha	62
9	Lawrence Weiner	53
10	Robert Rauschenberg	83
11	Sigmar Polke	60
12	Thomas Ruff	69
13	Georg Baselitz	71
14	Louise Bourgeois	56
15	Rosemarie Trockel	51
16	Erwin Wurm	47
17	Francis Alys	33
18	William Kentridge	30
19	Marcel Broodthaers	60
20	Ai WeiWei	57

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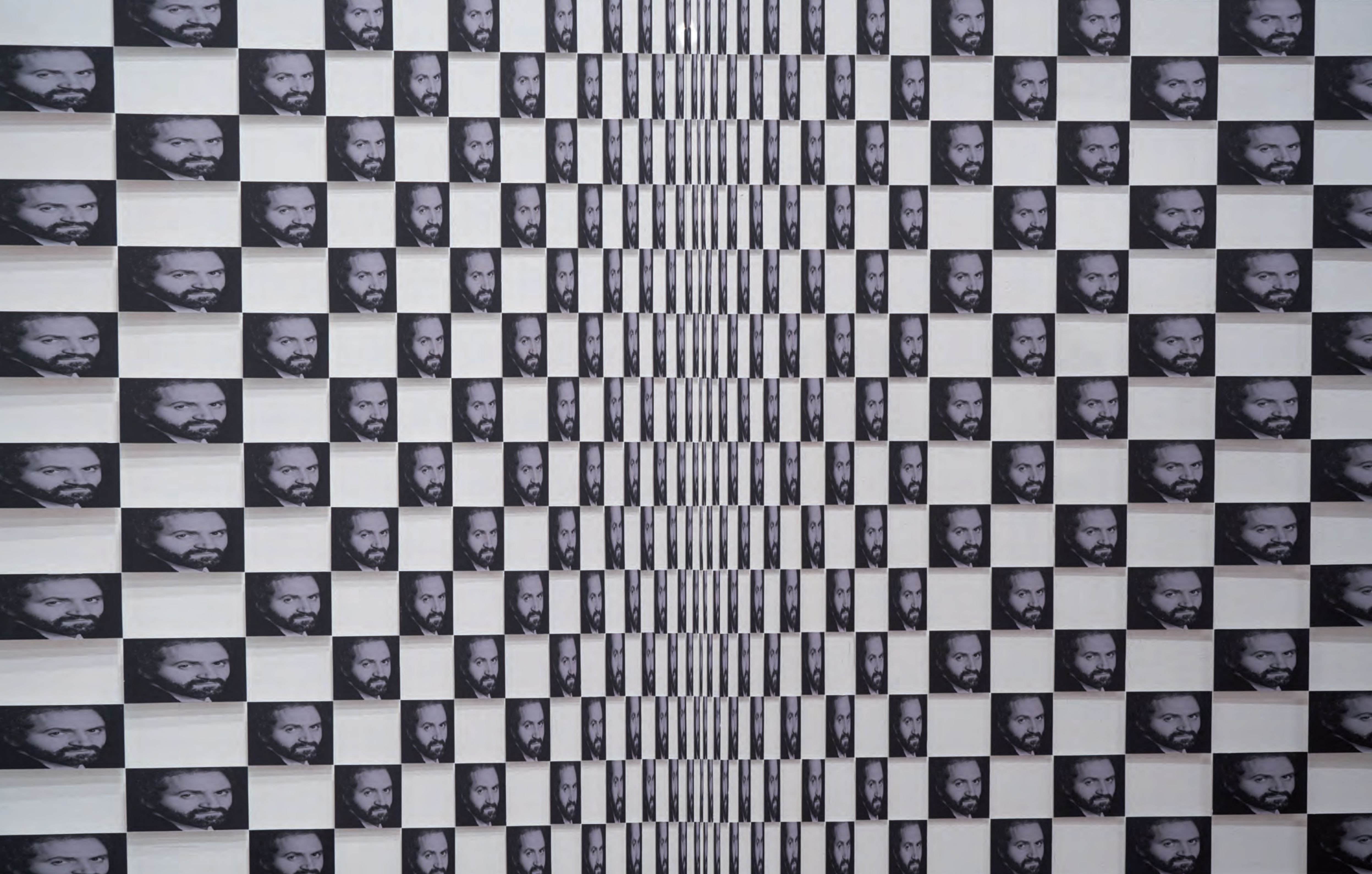
Table 5d | Top Prices in the Post War and Contemporary Sector in 2016

Artist	Title	Price ($m)	Auction House	Sale Region
Willem de Kooning	Untitled XXV (1977)	$66.3	Christie's	US
Jean-Michel Basquiat	Untitled (1982)	$57.3	Christie's	US
Cui Ruzhuo	The Grand Snowing Mountains	$39.6	Poly Auction	China
Cy Twombly	Untitled (New York City) (1968)	$36.7	Sotheby's	US
Fu Baoshi	The God of Cloud and Great Lord of Fate	$35.0	Poly Auction	China
Francis Bacon	Two Studies For A Self-Portrait	$35.0	Sotheby's	US
Gerhard Richter	A B, Still	$34.0	Sotheby's	US
Mark Rothko	No. 17	$32.6	Christie's	US
Wu Guanzhong	The Zhou Village	$30.4	Poly Auction	China
Clyfford Still	Ph 234	$28.2	Christie's	US
Francis Bacon	Version No. 2 Of Lying Figure With Hypodermic Syringe	$27.1	Christie's	UK
Gerhard Richter	Düsenjäger	$25.6	Phillips	US
Andy Warhol	Self-Portrait (Fright Wig)	$24.4	Sotheby's	US
Jean Dubuffet	Les Grandes Artères	$23.8	Christie's	US
Lucian Freud	Pregnant Girl	$23.2	Sotheby's	UK
Gerhard Richter	A B, St. James	$22.7	Sotheby's	US
Gerhard Richter	Abstraktes Bild (809-2)	$22.1	Christie's	US
Roy Lichtenstein	Nudes In Mirror	$21.5	Phillips	US
Jean-Michel Basquiat	Brother's Sausage	$18.7	Sotheby's	US
Cui Ruzhuo	Lotus in the Autumn Wind	$18.3	Poly Auction	China

This sector is highly concentrated by value in terms of sellers, with the top five auction houses accounting for 79% of the value of sales and 39% of the lots sold. The top five houses in 2016 were Christie's, Sotheby's, Poly Auction, Philips and China Guardian, who were also the top ranked in 2015. The top 20 auction houses accounted for 93% of the value of sales in 2016 (versus 90% in 2015), although 89% of this value (and 55% of the lots sold) was in the top ten. Christie's and Sotheby's accounted for the largest share by a significant margin, with Christie's accounting for 29% of sales values and Sotheby's with 27%. The combined share of the two auction houses was down 14% on 2015.

In 2016, there were **13,330 artists** who had works selling in the Post War and Contemporary sector at auction. However, only a very small proportion of 1% had sales in excess of $1 million.



5.3 | A Note on Living Artists

The Post War and Contemporary sector covers a wide range of artists, both living and deceased. Although artists within the sector differ widely on a number of criteria, there are some fundamental differences in the sub-sector of living artists that warrant investigation.

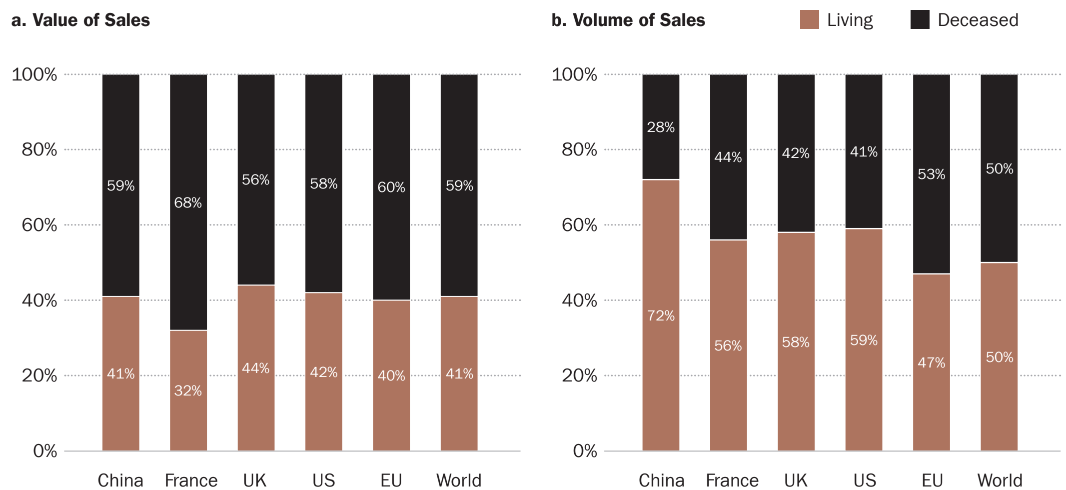
The art market is driven by scarcity and one of its most important economic features is that it is essentially supply-driven. Even if works of art are in high demand, there is only ever going to be a limited number of total works available (for deceased artists) and then, a much narrower amount on the market at any particular point in time. In other words, the supply of most paintings is finite, which can cause prices to catapult as buyers attempt to grasp increasingly limited opportunities to buy high quality works that often have a lengthy market cycle. Research on the art market shows that a typical cycle to market (across all sectors) can take around 30 years. In other words, from the time the work is first sold, it will take several decades (on average) for buyers to get the opportunity to purchase that work again, which adds to the scarcity value of art.

Because of the scarcity of high-quality works in circulation in the art market, increased supply can have a strong and positive effect on prices, unlike in other asset markets where excess supply drives prices downward. Art prices are therefore driven by scarcity value, the factor that increases their relative price based on their low or fixed supply rather than the usual costs of production and other inputs. The lack of supply, as seen in some areas in 2016, can also drive prices and aggregate values down.

In theory, living artists provide an exception to the limits of supply, being technically able to replenish their works to meet demand. This gives their segment of the auction market the potential to expand at a greater rate without the same limits that have characterized the wider market, particularly in recent years at the higher end. However, in reality, there are limits on an artist's ability to "make to order" given the technical and creative aspects of their work, particularly in the short-run. There are also several examples of very negative market reactions to artists or their agents augmenting supply, often in an effort to focus on immediate financial goals.

Looking at the empirical data, the auction market for living artists has in fact been a persistently lower value segment of the Post War and Contemporary market, and in 2016 accounted for 41% of the value of sales in this sector, despite accounting for half of the transactions that took place. In markets such as China, the volume of transactions

Figure 5i | Share of Sales for Living versus Deceased Post War and Contemporary Artists in 2016



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for living artists is more than 70% of the total, but they account for less than half of aggregate sales values. In all of the major art markets in 2016, living artists accounted for a majority of transactions but a minority of values.

For several years, the highest selling artists and highest prices were for deceased artists in the Post War and Contemporary sector, with Andy Warhol, Francis Bacon, Mark Rothko, Jean-Michel Basquiat and others with a firm historical footprint being the most sought after. However, in 2016, one of the top selling artists was a living artist (Gerhard Richter), although living artists remained the minority in the top 20 lists even though they dominated the exhibition rankings.

The market for living artists at auction reached $2.3 billion in 2016, with sales values dropping by 7% year-on-year, a lower decline than the wider Post War and Contemporary sector. The rankings of market share were much the same as the wider sector, with the US the leading market with 37% of sales by value, China second (33%) and the UK third (with a 19% share). The volume of sales was less concentrated, although the US and China still led (with a share of 25% and 18% respectively). The UK was on a par with France, both with a 12% of the total lots sold.

Sales in this sub-sector in the US performed better than the wider sector year-on-year, dropping 12%, whereas in the UK, there was a much greater decline of 41%. As in the wider Post War and Contemporary sector, both China and France had positive results, with a 9% increase in value in France and an advance of just over 50% in China.

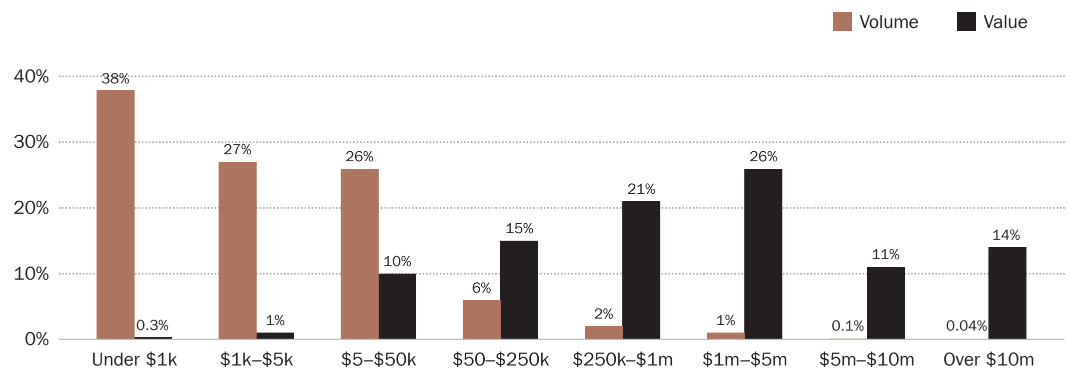
The volume of works in the sub-sector of living artists also declined in 2016 by 10%, just slightly less than the wider sector, while the rate of buy-ins was on par at 22%. While some artists in this sector could be perceived as more risky, with less certain track records of prices at auction in some cases than more established deceased artists, there is no evidence of this in the data on auction rates. Like the wider sector, works that sold during the year tended to be within or above their estimated valuation ranges. 41% of lots sold within their presales estimate range and 36% sold at prices above estimates, with the latter accounting for the majority of sales by value at 54%. 23% of lots were sold below their estimates and these accounted for just 5% of the market's sales values. While this indicates a relatively low level of risk (or one on par with the wider sector), it is worth noting that the results at auction are not necessarily representative of the wider cohort of living artists. The sample of 6,970 artists who had sales at auction in 2016 are likely to represent more established artists, with the majority of living artists working only in the primary market and not making sales at auction at all.

Average prices in this sub-sector in 2016 were about 80% of the prices in the wider Post War and Contemporary sector at just over $45,700. Unlike the wider sector, however, global averages increased slightly year-on-year (by 3%) with increases in the US, China and France, and a decline in the UK.

Even though there were a number of sales in excess of $10 million by living artists during the year, the bulk of sales were in lower end of this market. In 2016, 91% of living artists' works that sold at auction were priced below $50,000, with the majority (65%) sold for less than $5,000. These transactions made up only 12% of the sector's aggregate value, while those over $50,000 accounted for 88%. Works priced above $1 million accounted for the majority (52%) of value in 2016 in less than 1% of the lots sold. Within the $1 million plus segment, sales between $1 million and $5 million had the largest share of value and were the single largest price segment overall.

This living artists sub-sector made up the majority share (63%) of the volume of all Post War and Contemporary lots sold for less than $50,000 in 2016, but just 43% of those selling for above $50,000 and 44% of the market segment over $1 million. It accounted for the minority of value in all price segments, with 41% of the value of works over $50,000 and 39% of the value over $1 million.

Figure 5j | Sales of Living Artists by Price Bracket in 2016



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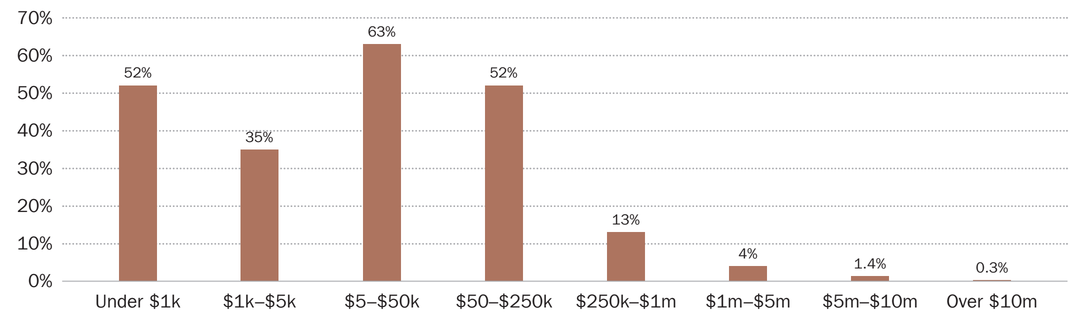
In 2016, 6,970 living artists had works selling at auction, representing just over half (52%) of the total Post War and Contemporary artists with sales during the year. Like the wider sector, some of the densest segments were in the lower price range up to $50,000, however, the middle market was also important for living artists, with just over half of the artists at auction having works sold in the segment between $50,000 and $250,000 (versus only 12% in the wider sector). While only a tiny fraction sell in the sector above $10 million, 4% had sales in the segment between $1 million and $5 million.

The German artist Gerhard Richter was the top selling living artist in 2016, accounting for 8% of the value of works sold in the sub-sector in less than 1% of total lots. The market for living artists' works is a little more concentrated in terms of values, with the top 20 artists accounting for 36% of sales in 2016.

Even in this smaller sub-sector of artists, there is little cross-over between the top selling artists and those ranked highest in the exhibition sector, with only two artists (Gerhard Richter and Yayoi Kusama) common to both in 2016. In the previous five years, the cross-over between these rankings has ranged from two artists to a maximum of four in 2014.

The highest priced work auctioned in 2016 was Cui Ruzhuo's *Grand Snowing Mountains*, which sold for $39.6 million at Poly Auction in Hong Kong. Gerhard Richter had the second highest lot, *A.B., Still*, sold at Sotheby's in New York for $34 million. Richter had five lots in the top 20 lots sold at auction in this market in 2016.

Figure 5k | Share of Artists by Price Segment in the Living Artists Sector in 2016



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The market for living artists at auction reached **$2.3 billion in 2016**, with sales values dropping by 7% year-on-year, a lower decline than the wider Post War and Contemporary sector.

Table 5e | Top 20 Selling Living Artists in 2016

Rank	Artist	Share of Value	Share of Volume
1	Gerhard Richter	8%	0.42%
2	Cui Ruzhuo	3%	0.09%
3	Yayoi Kusama	2%	0.61%
4	Richard Prince	2%	0.08%
5	Christopher Wool	2%	0.05%
6	Jeff Koons	2%	0.07%
7	David Hockney	2%	0.38%
8	Peter Doig	2%	0.06%
9	Adrian Ghenie	1%	0.06%
10	Yoshitomo Nara	1%	0.32%
11	Robert Ryman	1%	0.02%
12	Zeng Fanzhi	1%	0.07%
13	Rudolf Stingel	1%	0.04%
14	Frank Auerbach	1%	0.07%
15	Anselm Keifer	1%	0.07%
16	Mark Bradford	1%	0.02%
17	Pierre Soulages	1%	0.18%
18	Frank Stella	1%	0.26%
19	Maurizio Cattelan	1%	0.03%
20	Damien Hirst	1%	0.44%
Others	Others	64%	97%

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Table 5f | Top 20 Exhibited Living Artists in 2016

Rank	Artist	Number of Exhibitions
1	Bruce Nauman	56
2	Gerhard Richter	84
3	Cindy Sherman	56
4	John Baldessari	57
5	Ed Ruscha	62
6	Lawrence Weiner	53
7	Thomas Ruff	69
8	Georg Baselitz	71
9	Rosemarie Trockel	51
10	Erwin Wurm	47
11	Francis Alys	33
12	William Kentridge	30
13	Ai Weiwei	57
14	Wolfgang Tillmans	53
15	Richard Serra	36
16	Hans-Peter Feldmann	38
17	Christian Marclay	32
18	Yayoi Kusama	50
19	Olafur Eliasson	38
20	Douglas Gordon	38

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Table 5g | Top Prices for Living Artists in 2016

Artist	Title	Price ($m)	Auction House	Sale Region
Cui Ruzhuo	The Grand Snowing Mountains	$39.6	Poly Auction	China
Gerhard Richter	A B, Still	$34.0	Sotheby's	US
Gerhard Richter	Düsenjäger	$25.6	Phillips	US
Gerhard Richter	A B, St. James	$22.7	Sotheby's	US
Gerhard Richter	Abstraktes Bild (809-2)	$22.1	Christie's	US
Cui Ruzhuo	Lotus in the Autumn Wind	$18.3	Poly Auction	China
Maurizio Cattelan	Him	$17.2	Christie's	US
Peter Doig	The Architect's Home in the Ravine	$16.4	Christie's	UK
Jeff Koons	One Ball Total Equilibrium Tank	$15.3	Christie's	US
Christopher Wool	Untitled (1990)	$13.9	Sotheby's	US
Christopher Wool	And If You	$13.6	Christie's	US
Lena Cronqvist	Trolovningen	$12.8	Bukowskis	Sweden
Gerhard Richter	Garten	$12.7	Sotheby's	UK
John Currin	Nice 'N Easy	$12.0	Christie's	US
David Hockney	Woldgate Woods, 24, 25, And 26 October 2006	$11.7	Sotheby's	US
Robert Ryman	Valentine	$10.8	Christie's	US
Richard Prince	Runaway Nurse	$9.7	Christie's	US
Robert Ryman	Venue	$9.3	Christie's	US
Jenny Saville	Shift	$9.1	Sotheby's	UK
Adrian Ghenie	Nickelodeon	$9.0	Christie's	UK

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Just as in the Post War and Contemporary sector, Christie's and Sotheby's dominate in terms of the value of sales, accounting for a combined share of 56% of sales in 2016. The top five houses accounted for an even more concentrated share of sales at 82%, but a smaller share of the lots sold (25%), and included Christie's, Sotheby's, Poly Auction, Philips, and Beijing Council. The top 20 auction houses in this sub-sector accounted for 95% of the value of sales in 2016 and a majority of the lots sold (57%).

Gerhard Richter was the top selling living artist in 2016, accounting for **8%** ofthe value of works sold in the sub-sector **in less than 1%** of total lots. The top 20 living artists accounted for **36%** of sales by value in 2016.

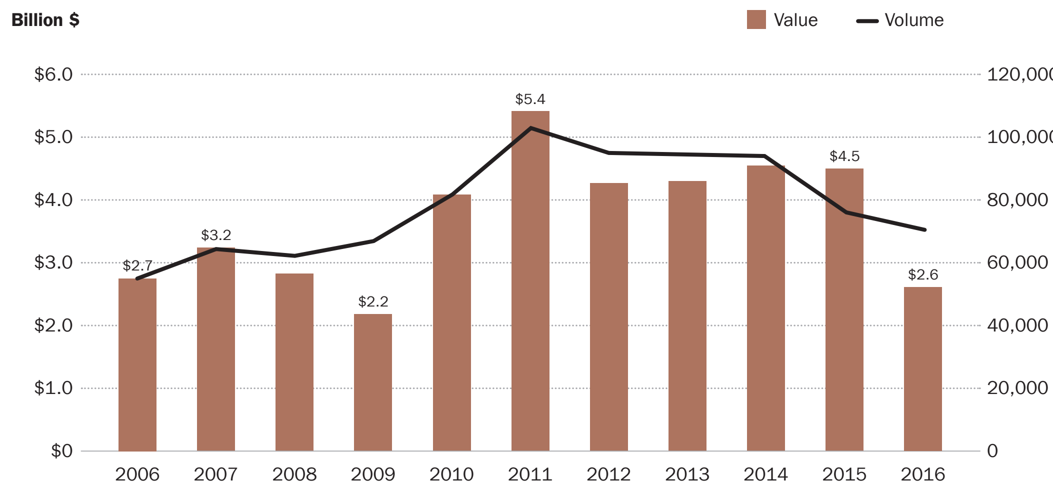
5.4 | Modern Art

The Modern art sector remained the second largest in the fine art market in 2016, but its share by value dropped eight percentage points year-on-year to 23%, while its share of the volume of lots sold remained stable at 29%. The value of aggregate sales in this sector has been lower than Post War and Contemporary art for the last five years. This drop in share and its poorer performance in sales than Post War and Contemporary in 2016 meant that the margin between the two sectors was its widest in ten years (with Post War and Contemporary having a 28% greater share of the market).

In 2016 sales in the Modern sector fell substantially by 43% year-on-year to reach $2.6 billion, with declines in all of the major art markets. After strong sales up to 2007, this sector lost one-third of its value in the years between 2007 and 2009. However, like Post War and Contemporary, it recovered very strongly, and over the following two years more than doubled in value to a high of $5.4 billion, its historical peak, in 2011. As the Chinese market cooled, values declined 22% in 2012, but then the sector maintained a high and relatively stable level of sales. Sales fell by just 1% in 2015, a much smaller decline than Post War and Contemporary art and the fine art market as a whole, buoyed by high prices attained for a few artists at auction, with works by Pablo Picasso, Alberto Giacometti and Amedeo Modigliani sold for in excess of $100 million. However, the number of very high-end lots dropped substantially in 2016, and the market fell back to its lowest level since 2009. Although the level of sales achieved in 2016 was still 18% higher than in 2009, it was 5% less than the level reached ten years previously in 2006.

The number of lots sold also declined in 2016 (by 6%), the second year of decreasing volumes, leaving transactions nearly 25% below their peak in 2011. Around one-third of works brought to auction during the year were bought-in, which is on a par with the wider fine art market, but 11% higher than the Post War and Contemporary sector. Like the Contemporary sector, works that sold during the year also tended to be within their estimated valuation ranges. 38% of the lots sold were within their presales estimate range and 37% above estimates, with the latter accounting for the majority of sales by value at 59%. The remaining 25% of lots sold below their estimates, and these accounted for just 4% of total sales values. This indicates to some extent that for the majority of the works that were brought to auction, those that did sell (and were not bought-in) sold at expected or better-than-expected prices, and the decline in the market was again very much supply-driven.

Figure 5l | The Modern Art Sector: 2006–2016

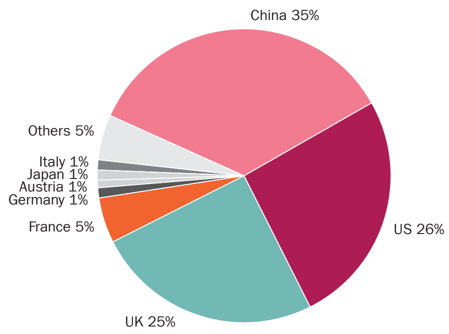


The global share of this sector has varied in recent years, with China maintaining the largest share of the market between 2011 and 2014. However, the US regained premier position in 2015 with a 45% share of the market by value, its highest share since 2006. This was to be short-lived and in 2016, China regained its dominance, increasing share by 12 percentage points to reach 32% while the US dropped to 26%. The UK accounted for 25% of the market by value, a rise of six percentage points year-on-year and its highest share since 2008.

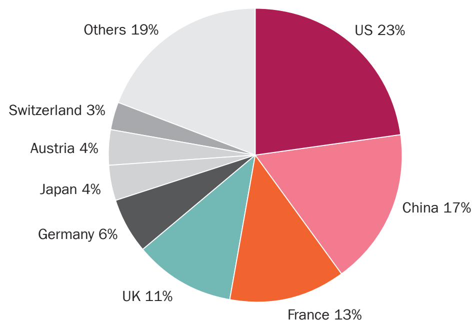
Despite its falling share of value, the US still had the highest share of individual transactions at 23%, while China, in second place, accounted for 17%, up 3% on 2015. The EU accounted for 44% of the lots sold in this sector and 37% of its value, a rise of 10% year-on-year but still considerably less than its peak of 46% in 2008.

Figure 5m | **Market Share of the Modern Sector in 2016**

a. Market Share by Value

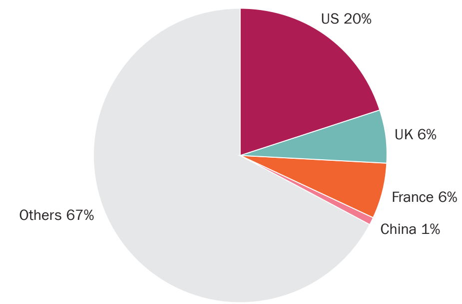


b. Market Share by Volume



In the context of exhibitions, the US still led in terms of the number of exhibitions globally in this sector in 2016. However, as in the Post War and Contemporary sector, market shares are less concentrated and more globally spread, with the US accounting for 20% of the total. The US share dropped 5% over ten years and peaked at 28% in 2011. The top four art markets have a 33% share of the number of exhibitions in 2016, considerably less than their 64% share of the volume of sales or 90% share by value. The share of these four markets has varied from a low of 32% in 2015 to 41% in 2011 and 2012, although always remaining a minority share in strong contrast to sales.

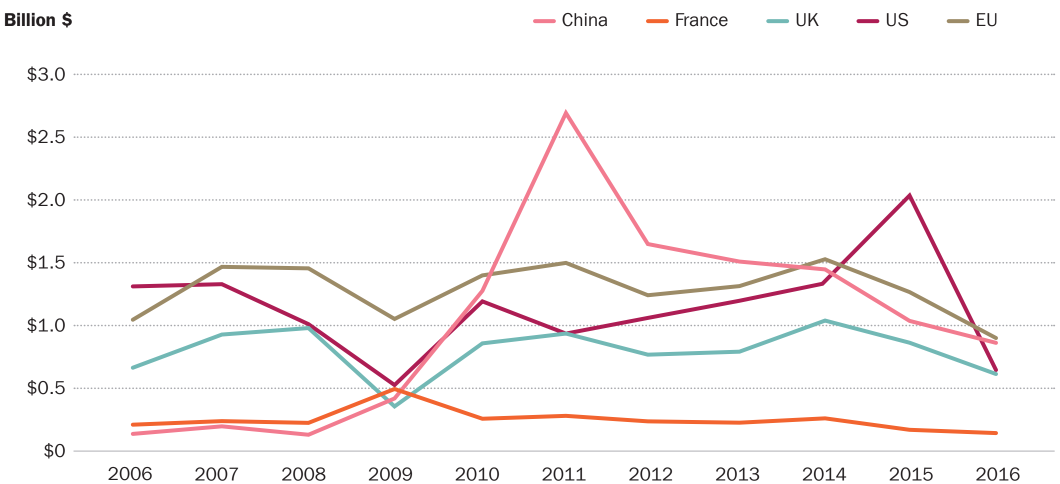
Figure 5n | **Global Share of Exhibitions in the Modern Sector in 2016**



While national markets have seen quite different trajectories of growth over the last ten years, Figure 5o shows the consistent decline in 2016 across all of the major markets.

After four years of growth and a large annual increase of over 50% in values, sales in the US reached a peak of just over $2 billion in 2015. However, sales fell 67% in 2016 reaching $662 million. Sales were still 22% above the low point in 2009, but because of the large decline in 2016, were nearly 50% less than those achieved a decade before in 2006.

Figure 5o | **Sales in the Modern Sector 2006–2016: Key Markets**



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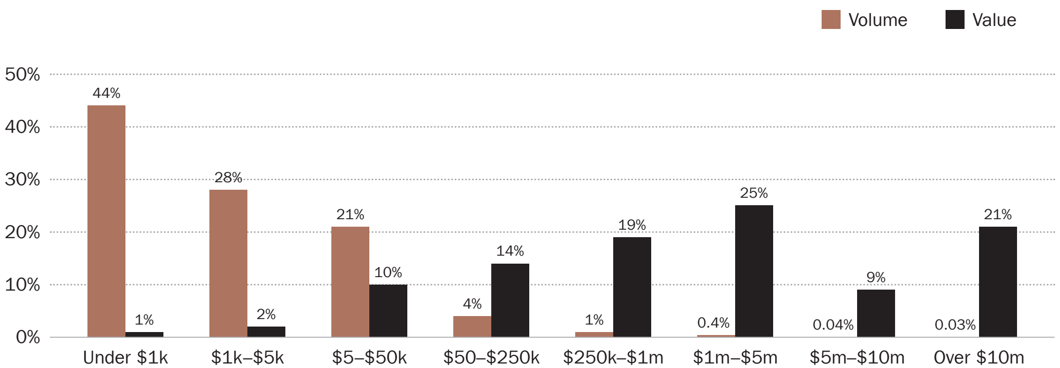
Sales also declined in China, but by a more moderate 14%, reaching $893 million. This sector of the Chinese market experienced astonishing three-digit growth rates in the years from 2009 through 2011, peaking at $2.7 billion, and making it the largest market worldwide in this sector for the first time with a share of 50% of the value of sales. However, since then, sales in China have declined each year, shrinking the market to one-third of its size. Looking over ten years, the market has still advanced considerably, increasing in value by more than 550%, with annual growth rates of 40%. China's market share has increased by 30% over the decade, with a consequent decline in share in the EU and US markets.

The UK market peaked at $1 billion in 2014, but then declined for two years, with a 27% drop in sales in 2016. With total values of $631 million in 2016, sales were still 80% above the bottom of the market in 2009 (when the market reached $351 million), but were 6% less than a decade ago. French sales of Modern art also dropped 23% in 2016, reaching $135 million, their lowest level in ten years, and the EU as a whole showed a decline of 29% in value.

With less lots for sale at the highest end and some moderating prices in other brackets, average prices in this sector experienced a sizeable decline of 46% year-on-year, with double-digit reductions in all of the major art markets worldwide from 23% in the UK to 66% in the US.

Although the level of sales achieved in 2016 in the Modern sector was **18% higher** than in 2009, it was **5% less** than the level reached ten years previously in 2006.

Figure 5p | Sales in the Modern Sector by Price Bracket in 2016



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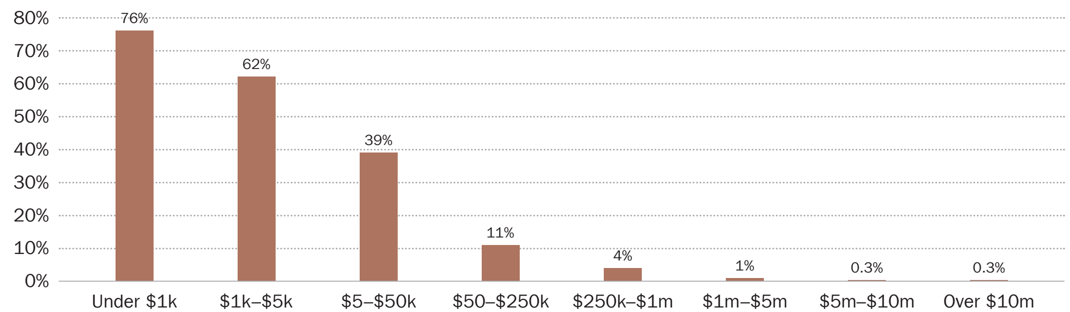
While the sector came into focus in recent years for record-breaking prices at auction, most (94%) works sold in 2016 were for prices below $50,000, despite these transactions accounting for just 13% of overall sales values. The majority (73%) of lots sold were sold at prices less than $5,000, although these accounted for a very small share of just 3% of total sales values.

Works sold for over $50,000, on the other hand, accounted for the majority of value (87%), while those over $1 million, although representing less than 1% of the number of lots, accounted for 54% of the overall value (down 7% in share in this segment on 2015).

In 2015, the largest segment of value in the $1 million-plus segment was works priced above $10 million, which accounted for a share of 33% of total sales values. In 2016, however, the share in this segment fell to 21%, with less than half the number of lots sold at above $10 million,

Figure 5q | Share of Artists by Price Segment in the Modern Sector in 2016



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the lowest number since 2011. The value of all works sold for over $10 million was only 35% of that achieved in 2015, and sales in the segment of works over $1 million were around half the value of the previous year. This sector also had significantly more lots priced above $10 million than Post War and Contemporary art in 2015. However, in 2016 this was reversed with half the number in the Modern sector.

In 2016 there were close to 6,500 artists with works sold at auction in this sector. Most of these artists' works sold at lower price levels, with the most common segment being under $1,000. As in the Post War and Contemporary sector, there is a very small group of artists that sell at the highest end of the market, with just 23 artists with works sold for in excess of $10 million during the year (versus 25 in 2015). These artists represented just 0.3% of the total number of artists with works selling at auction in the sector during the year, while less than 2% of artists had works selling for more than $1 million.

Picasso was the top selling artist in this sector in 2014 and 2015, however in 2016, Chinese artist Zhang Daqian achieved the highest sales with a market of just under $322 million, including three lots in the top 20 prices at auction. Picasso's total sales in 2016 were just under $300 million and included *Femmes Assise*, the top selling lot at auction in this sector in 2016, selling for $64 million at Sotheby's in London. Although this was an extremely high price, it was significantly less than the world record price achieved by the artist at auction in 2015, when *Les Femmes d'Alger (Version O)* sold for $179 million in New York.

The concentration of value in the top 20 artists was significantly more pronounced in this sector than in Post War and Contemporary art, with their work accounting for 63% of total sales values in just 8% of transactions.

According to the exhibition analysis in Table 5i, Picasso was the highest ranked artist, with 125 major exhibitions during the year. There is more cross-over in this sector with the top ranked artists at auction, with eight artists appearing in both top 20 lists (and six in both 2014 and 2015). This indicates that the appreciation of artists in this sector and their relative importance in an art historical sense are more built into market valuations. It also reflects, to some degree, the period, with a greater number of established artists with an historical and reputational impact, and also the lower number of artists in the sector.

$322 m

In 2016, Chinese artist **Zhang Daqian** achieved the highest sales, including three lots in the top 20 prices at auction.

The top 20 auction houses in this sector accounted for 93% of the value of sales in 2016 (up 4% on 2015), in just under half (48%) of the number of lots sold. The top five auction houses (Christie's, Sotheby's, Poly Auction, Beijing Council and China Guardian) accounted for most of that share, with 81% of the sales in the sector by value, up 2% on 2015. Christie's and Sotheby's alone accounted for 62%, down 5% on their combined share in 2015, with Christie's marginally leading.

Table 5h | Top Selling Artists in the Modern Sector in 2016

Rank	Artist	Total Sales Value	Lots Sold
1	Zhang Daqian	13%	0.89%
2	Pablo Picasso	12%	1.95%
3	Fu Baoshi	6%	0.14%
4	Amedeo Modigliani	4%	0.02%
5	Marc Chagall	3%	0.87%
6	Xu Beihong	3%	0.26%
7	Henry Moore	2%	0.27%
8	Lin Fengmian	2%	0.24%
9	Fernand Léger	2%	0.13%
10	Li Keran	2%	0.24%
11	Lu Yanshao	2%	0.37%
12	Joan Miró	2%	0.86%
13	Georgia O'Keeffe	2%	0.02%
14	Pu Ru (Pu Xinyu)	2%	1.12%
15	Sanyu	1%	0.11%
16	Pan Tianshou	1%	0.09%
17	Maurice de Vlaminck	1%	0.10%
18	Alberto Giacometti	1%	0.08%
19	Barbara Hepworth	1%	0.05%
20	Francis Picabia	1%	0.08%
Others	Others	37%	92%

Table 5i | Top 20 Exhibited Modern Artists in 2016

Rank	Artist	Number of Exhibitions
1	Pablo Picasso	125
2	Man Ray	62
3	Paul Klee	41
4	Max Ernst	32
5	Joan Miró	48
6	Alberto Giacometti	27
7	Salvador Dalí	27
8	Max Beckmann	35
9	Ernst Ludwig Kirchner	30
10	Walker Evans	21
11	Laszlo Moholy-Nagy	23
12	Jean Arp	36
13	Fernand Léger	30
14	Marc Chagall	21
15	Henri Cartier-Bresson	27
16	Otto Dix	18
17	René Magritte	20
18	George Grosz	36
19	Francis Picabia	26
20	Kurt Schwitters	15

Table 5j | **Top Prices in the Modern Sector in 2016**

Artist	Title	Price ($m)	Auction House	Sale Region
Pablo Picasso	Femme Assise	$63.8	Sotheby's	UK
Amedeo Modigliani	Jeanne Hébuterne (Au Foulard)	$56.8	Sotheby's	UK
Zhang Daqian	Peach Blossom Spring	$34.9	Sotheby's	China
Henry Moore	Reclining Figure: Festival	$33.3	Christie's	UK
Qi Baishi	Album Of Landscapes	$28.4	Poly Auction	China
Pablo Picasso	Tête De Femme	$27.5	Sotheby's	UK
Zhang Daqian	The Swiss Snow Mountain	$23.9	Poly Auction	China
Pablo Picasso	Buste De Femme (Dora Maar)	$22.6	Christie's	US
Pablo Picasso	Homme À La Pipe	$18.4	Christie's	US
Maurice de Vlaminck	Sous-Bois	$16.4	Sotheby's	US
Zhang Daqian	Landscape after Ju Kan	$15.2	China Guardian	China
Georgia O'Keeffe	Lake George Reflection	$12.9	Christie's	US
Pablo Picasso	Le Peintre Et Son Modèle	$12.9	Sotheby's	US
Li Keran	Landscapes	$12.8	Beijing Council	China
Amedeo Modigliani	Jeune Femme À La Rose (Margherita)	$12.8	Christie's	US
Amedeo Modigliani	Madame Hanka Zborowska	$12.2	Christie's	UK
Max Ernst	The Stolen Mirror	$11.0	Christie's	UK
Paul Delvaux	Le Miroir	$10.7	Sotheby's	UK
Egon Schiele	Selbstbildnis Mit Gespreizten Fingern	$10.4	Christie's	UK
George Braques	Mandoline à la Partition (Le Banjo)	$10.2	Christie's	US

5.5 | Impressionist and Post-Impressionist

The Impressionist and Post-Impressionist sector represented 12% of the value of the fine art auction market in 2016 and 18% of the lots sold. Up to 2000, the sector maintained a share of just over 30% by value. However, the rise in the popularity of Post War and Contemporary art reduced this, with the sector falling to 20% in 2005, and losing successive increments each year since then.

The value of Impressionist and Post-Impressionist works sold at auction fell by 31% in 2016, reaching $1.3 billion, as sales in all of the major art markets declined. Like the other sectors of the market, after a relative boom in sales up to 2007, the sector fell back to nearly half its size from 2007 to 2009, but recovered strongly, reaching an historic peak of $2.4 billion in 2011, buoyed by rising values in the booming Chinese market. Sales sharply declined once more in 2012, with values falling 31% as the Chinese market cooled. Although growth returned up to 2014, the last two years have seen diminishing values, and in 2016 the market had fallen to 44% below its peak level, having only expanded 3% over ten years.

Despite the drop in values, the volume of works sold increased in 2016 by 13%, recouping some of the volume lost from the decline of 18% in 2015.

This rise in the number of transactions alongside declining sales indicates lower priced sales in the sector during the year. The rate of buy-ins in the sector was higher than the Modern and Contemporary sectors at 35%, although this ranged from 10% to 65% in different national markets, with the leading market, the US, slightly lower than average at 27%. Like the other sectors, works that sold during the year tended to be within their estimated valuation ranges. 38% of the lots sold were within their presales estimate range and 36% were above estimates, with these better-than-expected lots making up the majority of sales by value at 52%. The remaining 26% of lots sold below their estimates, but like other sectors, these only accounted for a small share (9%) of total sales values.

The US retained its position as the leading market in this sector with a share by value of 41%, down 4% year-on-year. China was the second largest market with a share of 24%, gaining 6% share year-on-year, while the UK lost an equivalent amount, falling to 19% and third place, its lowest share since 2011. The US also had the largest share of transactions (20%), again next to China (15%) and the UK (12%). The EU accounted for just over half of the lots sold in the market and for 30% of sales values, both down slightly on 2015.

Figure 5r | Impressionist and Post-Impressionist Auction Sales 2006–2016

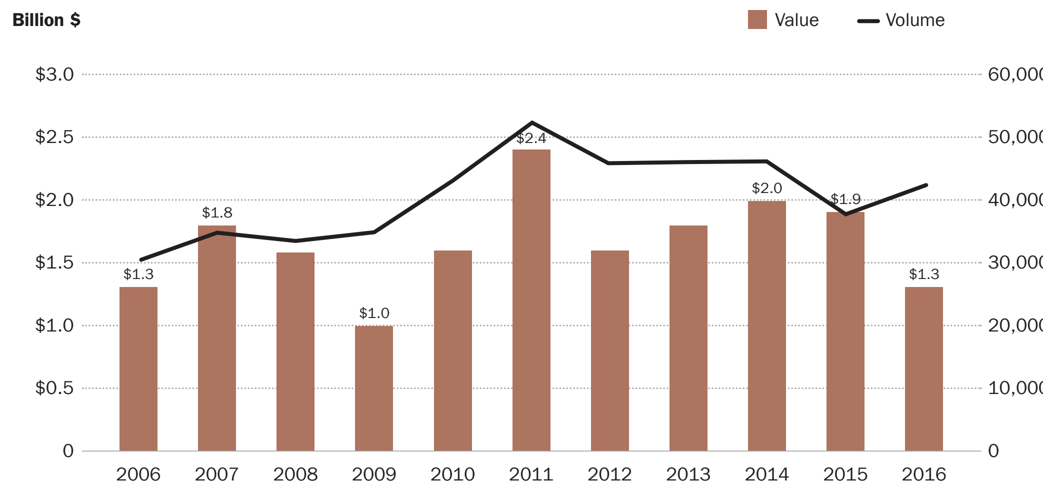
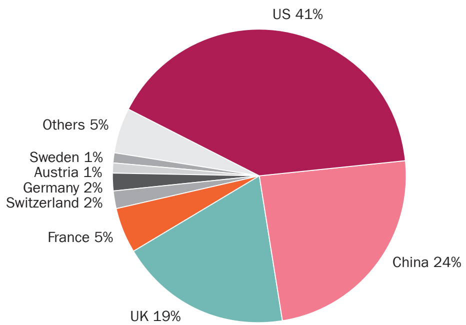
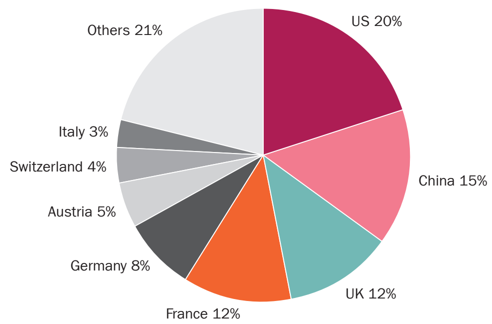


Figure 5s | Market Share of the Impressionist and Post-Impressionist Sector in 2016

a. Market Share by Value



b. Market Share by Volume

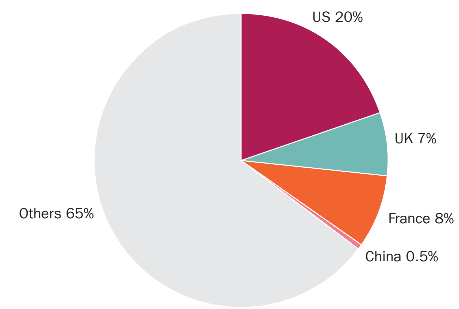


In terms of exhibitions, the US again led globally in this sector in 2016, with a 20% share in the number of exhibitions that took place worldwide. This share has fallen from a high of 32% in 2012 and was 29% ten years previously in 2006.

The global share of auction sales of the four largest art markets in this sector was over 90% by value in 2016 and they accounted for 54% of lots sold at auction. In terms of exhibitions, however, there is much more international dispersion, with these top markets accounting for a share of just 32% of the total exhibitions in the sector in 2016.

After reaching an historic peak of $871 million in 2015, the US market declined 37% to $555 million in 2016. Although this is still significantly above the level of 2009 when the market dropped to just over $300 million, sales have declined by 14% in the ten years from 2006.

Figure 5t | Global Share of Exhibitions in the Impressionist and Post-Impressionist Sector in 2016



From a very low base of just $24 million in 2006, the Chinese market grew to more than 40 times its size within the space of five years, reaching a high of over $1 billion in 2011 and becoming the largest market in this sector, with more than double the market share of the US that year. However, the market lost 52% of its value in 2012 and then, after two years of low growth, fell substantially by 36% in 2015 and again by 9% in 2016, reducing sales to $321 million, their lowest level since 2009.

Sales in the UK also declined for the second year in a row, with values decreasing a substantial 47% to $252 million. Sales values are now less than half the level they reached at the market's peak of $605 million in 2008, although they remained 6% higher than the bottom of the market in 2009. This reduction in values reduced the UK's share global share to its lowest point in five years, although it still dominated sales within the EU with a 63% share by value in 2016. The French market has declined for three consecutive years, reaching just over $67 million in 2016, and having decreased in size in the ten years from 2006 by 4%.

The strong contraction in values with a small increase in lots caused average prices in this sector to fall considerably in 2016, dropping 45% on 2015, with declines in all major markets from 34% in the US to just over 60% in the UK. In 2016, as in other years, most (94%) of the transactions at auction in this sector were for prices below $50,000, with the majority (73%) less than $5,000. As in other sectors, these low-priced transactions, although large in number, account

Figure 5u | Sales in the Impressionist and Post-Impressionist Sector 2006–2016: Key Markets

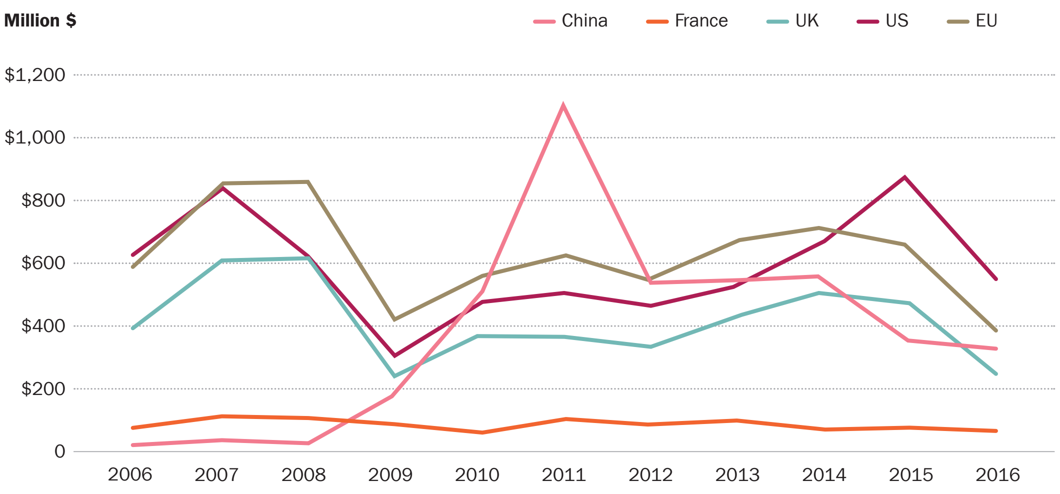
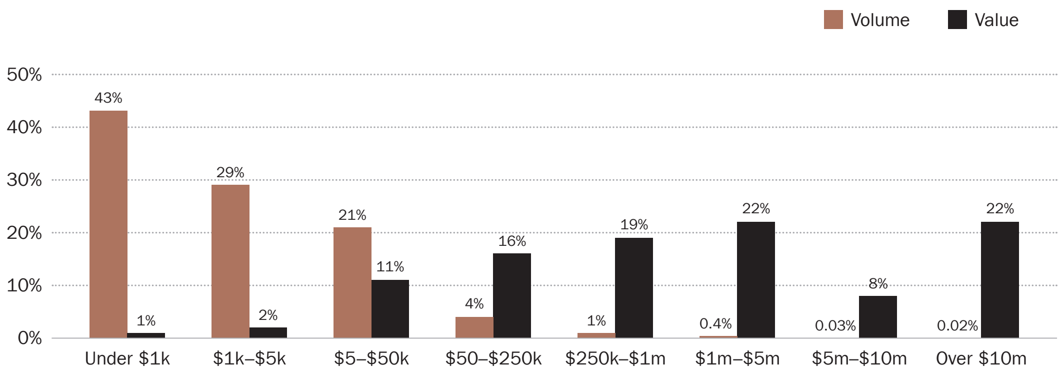


Figure 5v | Sales by Price Bracket in the Impressionist and Post-Impressionist 2016



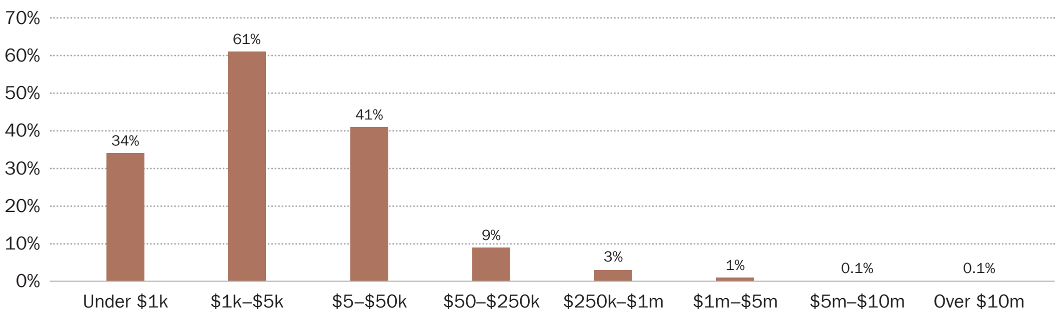
for a relatively small portion of the value of the market overall, with those below $50,000 representing a 14% share of total sales in 2016. The segment of prices above $50,000, on the other hand, accounted for 86% of total values (in just 6% of lots sold).

Just over half (51%) of the of the market's value in 2016 came from sales in excess of $1 million, down eight percentage points in share year-on-year from 2015. The largest segments by value were those between $1 million and $5 million and over $10 million (with a 12% share each).

The share of the $10 million plus segment dropped considerably from 2015, when it accounted for 36% of sales values, with almost three times as many lots selling for over $10 million in 2015 than in 2016.

The work of most artists in this sector in 2016 sold for less than $50,000, with the single largest segment being works priced between $1,000 and $5,000. Those selling works for over $1 million made up just 1% of the 6,387 artists whose work was sold at auction in this sector in 2016.

Figure 5w | **Share of Artists by Price Segment in the Impressionist and Post-Impressionist Sector in 2016**



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Qi Baishi was the highest selling artist in 2016, with sales of $225 million and accounting for 17% of the total value in the sector. Claude Monet accounted for 13% with sales of $170 million, including six out of the top 20 lots in this sector in 2016. The top 20 artists accounted for 68% of total sales by value in 2016, stable on 2015. Their share was slightly larger than the Modern sector (at 63%) but more than double Post War and Contemporary art (at 31%) with a much smaller group of artists in this sector and a high concentration of value at the top end.

The highest-priced lot in the sector in 2016 was Claude Monet's *Meule*, which sold at Christie's in New York for $81.4 million. This represented a record for the artist, with the previous highest price paid for a Monet painting being $80.4 million in 2008 for *Le Bassin Aux Nympheas*. It was also the highest priced work sold at auction in 2016, unlike the last several years when the highest prices have been in the Post War and Contemporary and Modern sectors, and indicative of the reduced supply in those sectors at the very highest end.

Unlike the Post War and Contemporary sector, there is a much higher correspondence between the rankings by auction sales and those by exhibitions. According to the exhibition rankings in Table 5m, the top artist in this sector, and the sixth highest ranked at auction, was Henri Matisse, with 39 major exhibitions in 2016. There is significantly more cross-over in this sector with 12 artists appearing in both the top 20 lists (and ten in 2015). Again, this indicates the relatively smaller group of key artists and the fact that their importance to the sector is appreciated both publicly and by the market.

Christie's and Sotheby's maintained a leading share of sales in this sector in 2016, with a combined 60% of total values (versus 69% in 2015) and 10% of the lots sold, with Christie's leading the market. The top 20 auction houses had a combined share of 89% of the value of sales and 37% of the lots sold, while the top five (Christie's, Sotheby's, Poly Auction, Phillips and China Guardian) accounted for 76% of total values and 17% by volume.

The share of the $10 million-plus segment of the Impressionist and Post-Impressionist sector dropped considerably, with almost **three times as many** lots selling for over $10 million in 2015 than in 2016.

Table 5k | **Top 20 Selling Impressionist and Post-Impressionist Artists in 2016**

Rank	Artist	Total Sales Value (USD)	Lots Sold
1	Qi Baishi	17%	1.29%
2	Claude Monet	13%	0.03%
3	Huang Binhong	6%	0.54%
4	Wu Changshuo	5%	1.03%
5	Edvard Munch	5%	0.14%
6	Auguste Rodin	4%	0.15%
7	Wassily Kandinsky	3%	0.09%
8	Henri Matisse	2%	0.42%
9	Wu Changshou	2%	0.39%
10	Pierre-Auguste Renoir	2%	0.26%
11	Paul Cézanne	2%	0.05%
12	Paul Signac	1%	0.14%
13	Pierre Bonnard	1%	0.12%
14	Vincent van Gogh	1%	0.02%
15	James Ensor	1%	0.20%
16	Paul Gauguin	1%	0.06%
17	Edgar Degas	1%	0.10%
18	Félix Vallotton	1%	0.05%
19	John Singer Sargent	1%	0.02%
20	Lyonel Feininger	1%	0.16%
Others	Others	32%	95%

Table 5l | **Top 20 Exhibited Impressionist and Post-Impressionist Artists in 2016**

Rank	Artist	Number of Exhibitions
1	Henri Matisse	39
2	Wassily Kandinsky	21
3	Emil Nolde	29
4	Edgar Degas	20
5	Claude Monet	23
6	Edvard Munch	21
7	Vincent van Gogh	21
8	Paul Cézanne	20
9	Auguste Rodin	29
10	Piet Mondrian	17
11	Paul Gauguin	21
12	Édouard Manet	17
13	Pierre-Auguste Renoir	20
14	Lyonel Feininger	15
15	Käthe Kollwitz	21
16	Pierre Bonnard	11
17	Alfred Stieglitz	9
18	Henri de Toulouse-Lautrec	12
19	Gustav Klimt	20
20	Odilon Redon	14

Table 5m | **Top Prices in the Impressionist and Post-Impressionist Sector in 2016**

Artist	Title	Price ($m)	Auction House	Sale Region
Claude Monet	Meule	$81.4	Christie's	US
Edvard Munch	Girls On The Bridge	$54.5	Sotheby's	US
Qi Baishi	Album Of Landscapes (1931)	$28.4	Poly Auction	China
Claude Monet	Le Bassin aux Nymphéas	$27.0	Christie's	US
Wassily Kandinsky	Rigide Et Courbé	$23.3	Christie's	US
Auguste Rodin	L'éternel Printemps	$20.4	Sotheby's	US
Auguste Rodin	Iris, Messagère Des Dieux	$16.9	Sotheby's	UK
Claude Monet	Le Palais Ducal Vu De Saint-Georges Majeur	$16.9	Sotheby's	UK
Henri Matisse	La Leçon De Piano	$15.7	Sotheby's	UK
Claude Monet	Au Petit Gennevilliers	$11.4	Christie's	US
Paul Signac	Maisons Du Port, Saint-Tropez	$10.7	Sotheby's	US
Claude Monet	Marée Basse Aux Petites-Dalles	$9.9	Sotheby's	US
Claude Monet	Camille À L'ombrelle Verte	$9.4	Sotheby's	US
James Ensor	Stopping Skeleton Masks	$7.9	Sotheby's	France
Qi Baishi	Lotus Studio	$7.7	China Guardian	China
Qi Baishi	Calligraphy, Painting And Seal	$7.6	China Guardian	China
Paul Cézanne	Ferme En Normandie, Été (Hattenville)	$7.4	Christie's	UK
Claude Monet	Près Monte-Carlo	$7.1	Sotheby's	US
Paul Cézanne	Théière Et Oranges (La Nappe)	$7.0	Christie's	US
John Singer Sargent	Poppies	$6.9	Sotheby's	US

5.6 | Old Masters and European Old Masters

The Old Master sector was the one area of the fine art auction market with positive results on aggregate in 2016. The sector increased 4% in share by both value and volume to account for 13% of the total value of sales and 16% of all fine art lots sold at auction. Old Master paintings covers all works sold by artists born between 1250 and 1820 of all nationalities. However, the more commonly used term "Old Master" is associated with the works of European artists. In 2016, 43% of the value of Old Master paintings was for the sale of European Old Master works (a stable share on 2015) and 39% of individual transactions. European Old Masters accounted for 6% of the value of global fine art auction sales and 6% of lots sold.

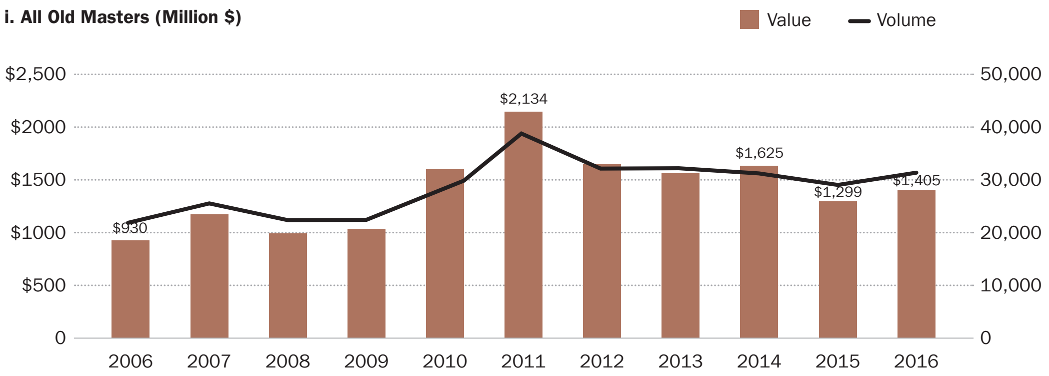
In 2016, the wider Old Master market reached total sales of just under $1.4 billion, an increase of 5% on 2015. The Old Master market, which includes many Chinese Old Master painters, peaked in 2011 at the height of the boom in China at $2.1 billion. As the Chinese market cooled in 2012, sales values in the sector dropped by 23%, while volumes also fell 15%. After that point the market was relatively stable, but then experienced a substantial decline of 20% in value in 2015. The return to positive growth in 2016 was due to increasing sales in the two major markets of China and the UK, and has brought sales to 47% above their level ten years previous in 2006.

The Old Master sector was the one area of the fine art auction market with positive results on aggregate in 2016.

Sales in the European Old Masters market also grew in 2016, increasing 6% to $594 million. Growth in this sector of the art market has often run counter to trends in other more modern sectors, and sales have been somewhat less volatile, with the scarcity of major, high-quality works in the sector appearing on the market preventing more dramatic swings up or down. Sales in the sector peaked in 2007 (at $906 million) and then fell 30% in the two years to 2009. Sales showed more patchy and moderate growth over the next few years but after a substantial rise of 19% in 2014, values fell by one third in 2015 and to their lowest point in ten years. The return to positive growth in 2016 was not enough to boost sales beyond their pre-2015 totals, and they remained 22% less than they were in 2006.

Figure 5x | **Old Master Painting Sales 2006–2016**

i. All Old Masters (Million $)



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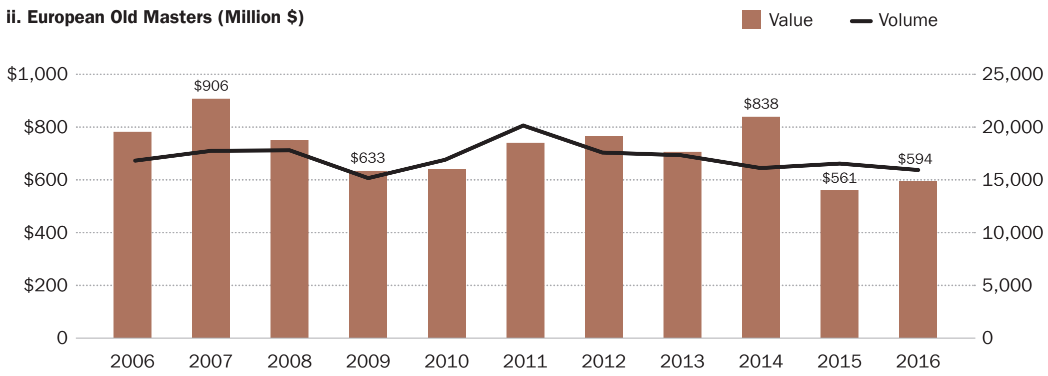
The return to positive growth in 2016 was not enough to boost sales of European Old Master works beyond their pre-2015 totals, and they remained **22% less than they were in 2006.**

ii. European Old Masters (Million $)



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The volume of works sold on the Old Master market increased by 12%, more than double the increase in values, indicating that the market's growth was driven by increased supply rather than merely escalating prices. The rate of buy-ins in the sector was relatively low at 25%. Works that sold during the year also tended to be within their estimated valuation ranges. 38% of the lots sold were within their presales estimate range and 36% were above estimates, with the latter accounting for the majority of sales by value at 56%. The share of lots sold below their estimate was 26%, accounting for 8% of the market's sales values. The low rate of buy-ins and high level of works sold within or above their estimates indicates reasonably strong demand in the sector.

The European Old Master sector had a higher rate of buy-ins at 36%, above the fine art auction market on aggregate. There was also a higher share of lots sold below their presale estimates at 32%, versus 37% above and 31% within the estimate range. The majority of sales values (62%) came from works sold above their estimate, with those sold below estimates accounting for 27%. In other words, only 11% of the value of works and 31% of the lots sold were within their presale estimate range, which could indicate the peculiar difficulties in estimating the value of Old Master pictures, with a great variation between works and a very thin turnover at the top of the market.

↑12%

The volume of works sold on the Old Master market increased by 12%, more than double the increase in values, indicating that the market's growth was driven by **increased supply** rather than merely escalating prices.

Buyers were cautious, with the high rate of buy-ins indicating weak demand for some of the works brought to auction, but as always in this sector, the high level of scarcity drove many lots beyond estimates, indicating competitive buying for the most sought after works.

China was the largest market in the wider Old Master sector in 2016, with a 45% share, up 2% on 2015. The UK is a key global center for sales of Old Master paintings and, while in second place at 19% in the wider sector, it is much more dominant in the more traditional European Old Master sector, where its global share was 43% by value (up 4% year-on-year). The UK has maintained a share of between 39% and 52% of this sub-sector over the last ten years, while the US has consistently been the second largest, with a share of 28% in 2016. The US was the third largest market by value and volume in the wider sector of Old Masters, but lost share in 2016 (by 3% and 5% respectively).

Due to the dominance of the UK, the EU accounts for 61% of the value of sales of European Old Masters (down 5% year-on-year), but a considerably smaller 29% in the wider sector.

China witnessed strong growth in sales of Old Master works, with values rising 16% to reach

Table 5n | Global Market Share: Old Master Paintings in 2016

Old Masters			European Old Masters		
Country	Share of Value	Share of Volume	Country	Share of Value	Share of Volume
China	45%	19%	UK	43%	28%
UK	19%	19%	US	28%	17%
US	18%	15%	France	7%	16%
France	4%	13%	Austria	5%	8%
Austria	2%	5%	China	4%	2%
Germany	2%	7%	Germany	3%	9%
Switzerland	1%	4%	Switzerland	2%	5%
Italy	1%	3%	Italy	1%	4%
Others	8%	16%	Others	6%	11%

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$639 million. However, after four years of stagnant or negative growth in sales prior to 2016, values are still just a little greater than half the peak of the market in 2011, when they reached $1.2 billion. Over the longer-term, however, the market has grown substantially, increasing to 16 times its size in the decade from 2006.

Sales in the UK in the wider Old Master sector grew by 6% to reach $270 million, with most of these sales (94% by value) of European Old Master works. Considering sales growth of European

↑4%

China was the largest market in the wider Old Master sector in 2016, with a **47% share, up 4% on 2015.**

Old Masters only, the UK performed even better, with sales increasing 16% year-on-year, but levels achieved were still lower than they were in 2006 ($359 million) and significantly below their peak of $438 million achieved in 2014.

Sales in the US Old Master market fell 11% in 2016 to $246 million, leaving them 9% less than in 2006, but still substantially above the bottom of the market in 2009. In the European Old Master sub-sector, which accounted for over 68% of all US Old Master sales, values fell 4%, their second year of decline, to $166 million, falling to 19% below their level ten years previous in 2006.

France, the third largest European Old Master market, experienced its fifth year of declining sales values, with both the wider Old Master sector and the European portion falling by more than 20% year-on-year, and bringing them to their lowest level since 2006. Sales in the EU fell 2% in the European Old Master sector, and in the decade from 2006 to 2016, sales have decreased by one third in value.

With a larger increase in volumes than values, average prices in the Old Master sector declined by 3%, with declines in most of the major art markets. Average prices in the European Old Master sub-sector, on the other hand, grew by 11% year-on-year.

In 2016, most (94%) of the lots sold in the Old Master sector were priced at less than $50,000, with 72% below $5,000. These works account for 14% of the market's value versus 86% for those priced over $50,000. The share of the value of works sold for over $1 million increased year-on-year by 12% to reach 52% in less than 1% of transactions. The segment of works sold for above $10 million rose significantly in share year-on-year, and was the single largest segment at 22% of total sales values (versus just 8% in 2015), showing again that this market often runs counter to trends in other sectors, most of which saw a decline in this top segment's share.

43%

The UK is a key global center for sales of Old Master paintings and in the more traditional European Old Master sector its share was 43% by value (up 4% year-on-year).

Figure 5y | Sales in the Old Master Sector 2006–2016: Key Markets

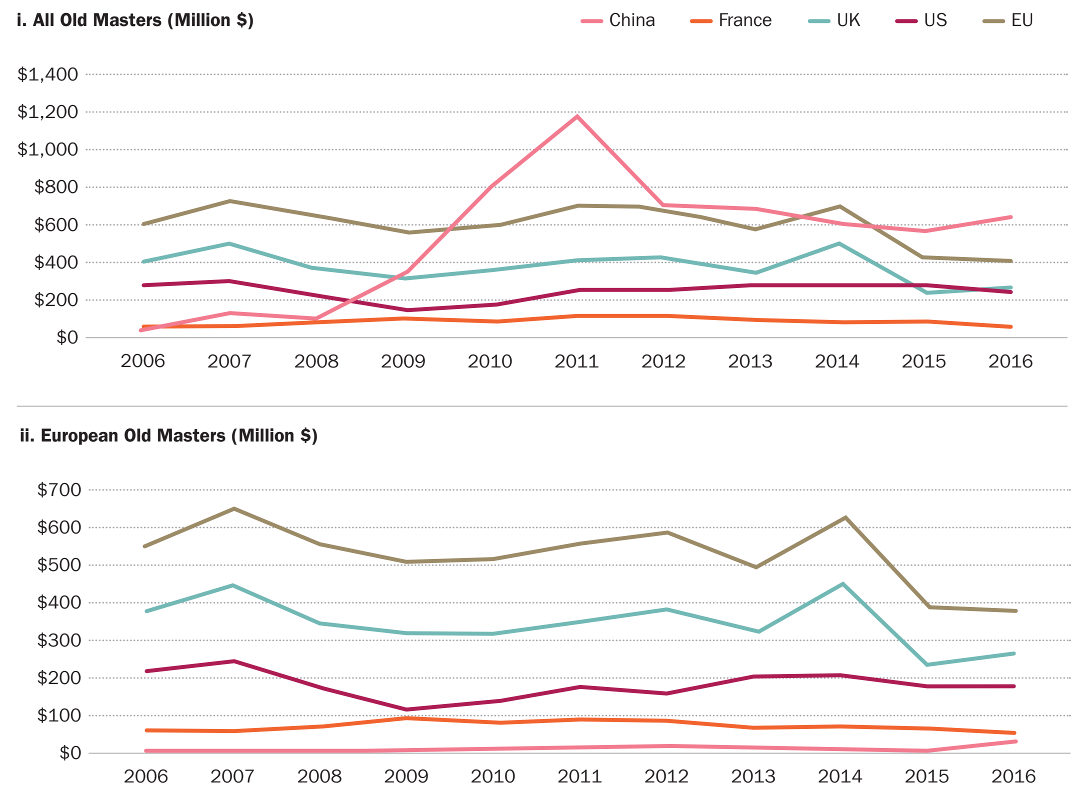
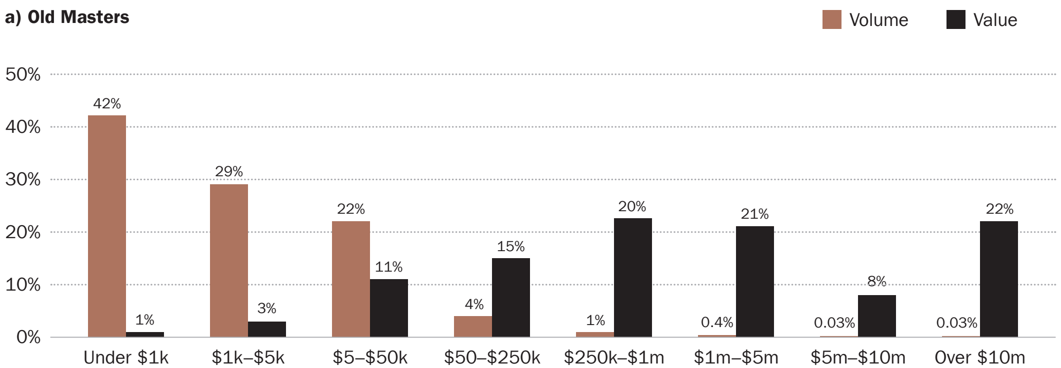
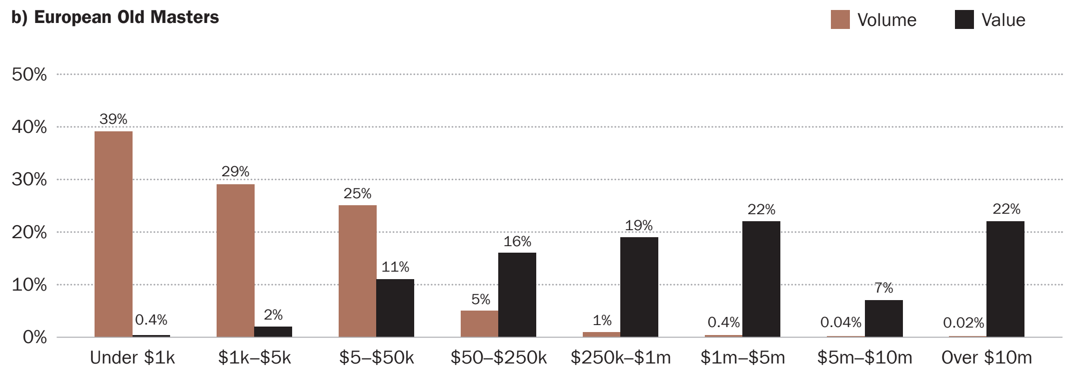


Figure 5z | Sales in the Old Master Sector by Price Bracket in 2016

a) Old Masters



b) European Old Masters



Similarly in the European Old Master sub-sector, 93% of the lots sold in 2016 were priced at less than $50,000, and they accounted for just 14% of the sector's total sales values. The number of lots sold for over $1 million increased 19% year-on-year and sales in this segment accounted for 51% of the sector's sales value. Within this high-end segment, the segment between $1 million and $5 million and the segment above $10 million were the largest at 22% each by value, with the latter having risen 14% in share on 2015 (when the segment between $50,000 and $250,000 was the largest by value).

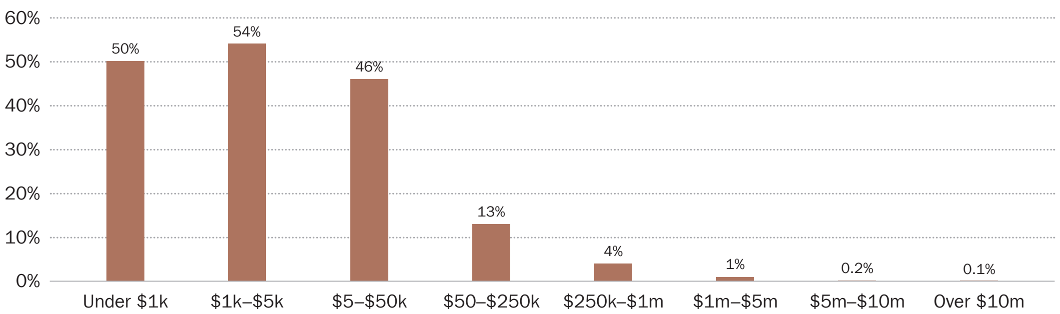
Although there is a vast number of Old Master artists, the number of artists whose works sold at auction in the Old Master sector in 2016 was just 6,630, while the group of European Old Master artists totaled 4,490.

The majority of the artists whose work was sold in the aggregate Old Master sector were for prices of less than $50,000, with the densest segment

The number of lots sold for over $1 million in the European Old Master sector increased 19% year-on-year and accounted for **51% of the sector's sales value.**

Table 5aa | Share of Artists by Price Segment in the Old Master Sector in 2016

i. All Old Masters



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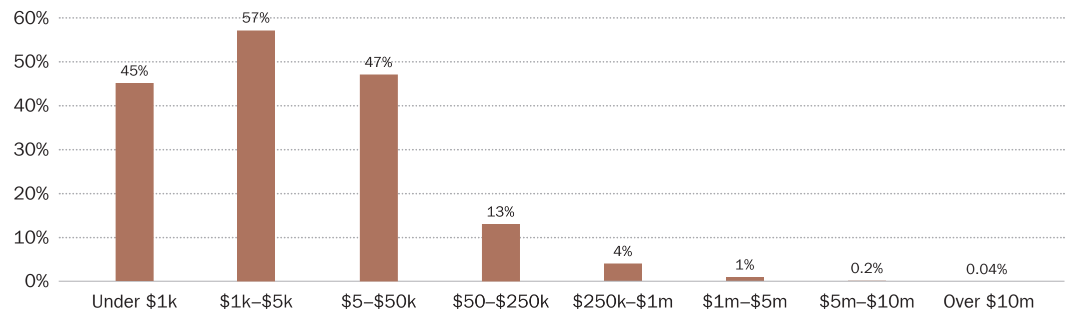
ii. European Old Masters



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The Old Master markets is less concentrated than some of the other sectors, with the top 20 artists accounting for **41% of the value of sales in 2016** and 1% of the lots sold.

being prices between $1,000 and $5,000 (with 54% of artists) versus less just 1% in the segment over $1 million. Similarly for European Old Masters, the most populated segments were works priced at less $5,000, with a similarly small share of 1% of artists who had works that sold at price levels in excess of $1 million in 2016.

The Old Master markets is less concentrated than some of the other sectors, with the top 20 artists accounting for 41% of the value of sales in 2016 and 1% of the lots sold. The top selling artist in 2016 was the Dutch Old Master painter, Peter Paul Rubens, with sales of $64 million and share of 5%. However, the majority of top selling artists in the sector in 2016 were Chinese Masters. Rubens also had the highest priced lot sold during the year, *Lot and his Daughters*, which sold for $57.9 million at Christie's London, representing the highest price for an Old Master work ever sold by the auction house. The highest priced work sold in China, In the European Old Master sector, the top 20 houses **accounted for 80%** of sales values, with the top five accounting for **73%.**

and the second highest lot price in the sector, was *Five Drunken Kings Return on Horses* by Ren Renfa, which sold for $44.1 million at Poly Auction in Beijing.

In the wider Old Master sector, Christie's and Sotheby's had the highest share of sales, with a combined share of 41% by value and 12% of the lots sold. Along with Beijing Council, China Guardian and Poly Auction, the top five houses accounted for 72% share by value, up 6% on 2015. The top 20 auction houses accounted for 86% of total sales values and 47% of the lots sold.

The European Old Master sub-sector was even more concentrated, with Christie's and Sotheby's accounting for the majority of sales (65% by value, down 7% on 2015). The top 20 houses accounted for 80% of sales values (and 42% of total lots), with the top five (Sotheby's, Christie's, Dorotheum, Bonham's and Koller) accounting for 73% (and 30% of lots sold).

Table 5o | Top 20 Selling Old Master Artists in 2016

Rank	Old Masters	Value	Volume	European	Value	Volume
1	Peter Paul Rubens	5%	0.05%	Peter Paul Rubens	11%	0.13%
2	Ren Renfa	3%	0.00%	Orazio Gentileschi	5%	0.02%
3	Wu Zhen	3%	0.01%	John Constable	4%	0.05%
4	Wang Duo	3%	0.10%	Pieter Brueghel the Younger	2%	0.05%
5	Orazio Gentileschi	2%	0.01%	Antonio Foler	2%	0.16%
6	Wang Hui	2%	0.10%	Bernardo Bellotto	1%	0.05%
7	Jiang Tingxi	2%	0.04%	Jan Brueghel the Elder	1%	0.10%
8	Zhu Da	2%	0.06%	Bonanat Zaortiga the Elder	1%	0.04%
9	Tang Yin	2%	0.06%	El Greco	1%	0.02%
10	Dong Qichang	2%	0.28%	Jean-Étienne Liotard	1%	0.01%
11	Wen Zhengming	2%	0.22%	Jean de Cambrai	1%	0.01%
12	Shi Tao	2%	0.06%	Valentin de Boulogne	1%	0.01%
13	John Constable	2%	0.02%	Sir Joshua Reynolds	1%	0.17%
14	Shen Zhou	1%	0.07%	Michaelina Woutiers	1%	0.01%
15	Qiu Ying	1%	0.00%	Jacob Jordaens the Elder	1%	0.05%
16	Zheng Xie	1%	0.00%	Sandro Botticelli	1%	0.04%
17	Zhang Ruitu	1%	0.00%	Rembrandt van Rijn	1%	1.58%
18	Pieter Brueghel the Younger	1%	0.02%	George Stubbs	1%	0.01%
19	Chen Hongshou	1%	0.06%	Bernardo Daddi	1%	0.01%
20	Jin Nong	1%	0.07%	Thomas Gainsborough	1%	0.08%
Others	Others	59%	99%	Others	63%	97%

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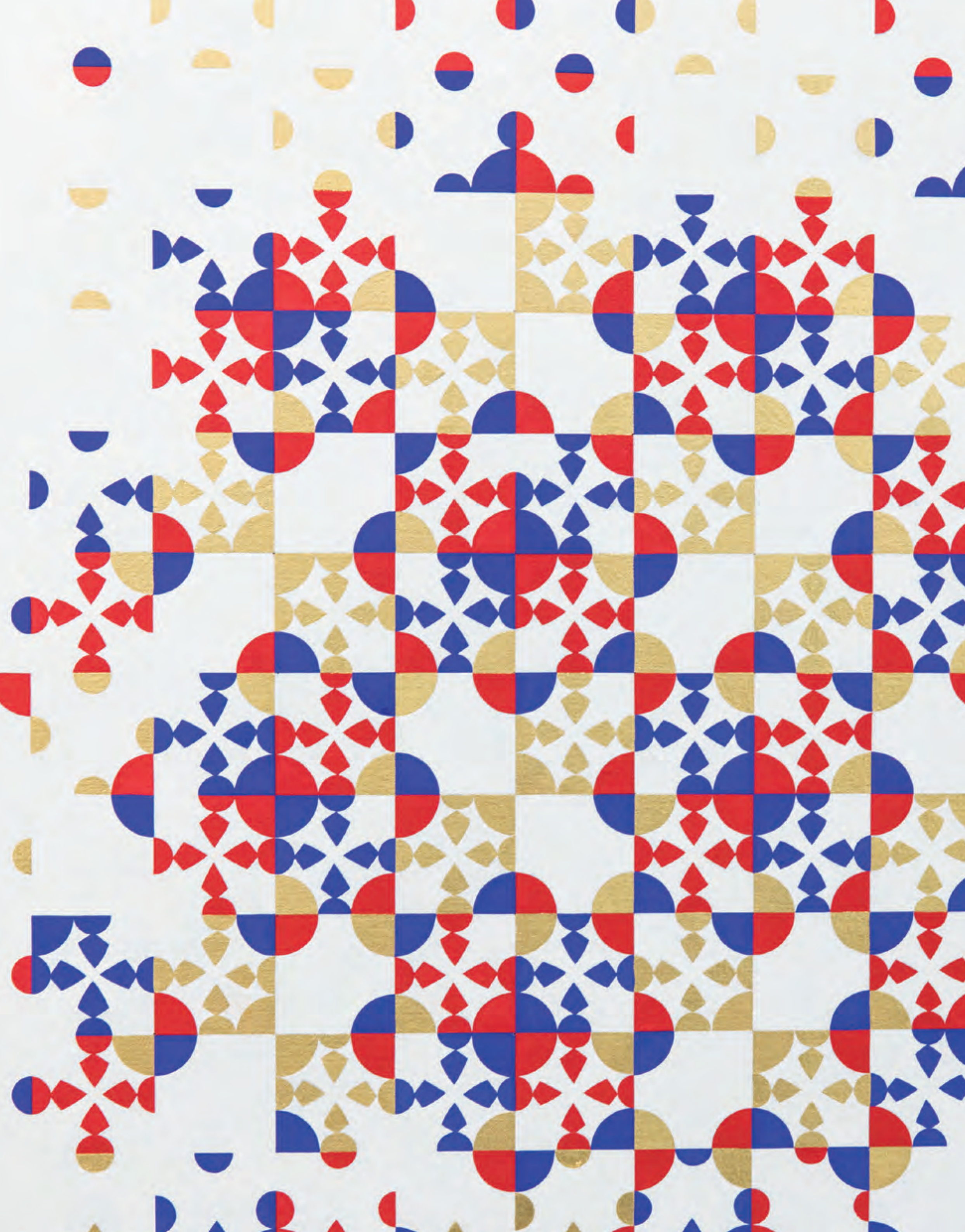
Table 5p | **Top Prices in the Old Master Sector in 2016**

i. Old Masters

Artist	Lot Title	Price ($m)	Auction House	Sale Region
Peter Paul Rubens	Lot And His Daughters	$57.9	Christie's	UK
Ren Renfa	Five Drunken Kings On Horses	$44.1	Poly Auction	China
Orazio Gentileschi	Danaë	$30.5	Sotheby's	US
Jiang Tingxi	One Hundred Kinds Of Silk Peony Spectrum Album	$26.4	Beijing Council	China
Wu Zhen	The Wind Forebodes The Coming Storm	$25.1	Beijing Council	China
John Constable	View On The Stour Near Dedham	$19.0	Christie's	UK
Qiu Ying	Chinese Poetic Atlas	$13.7	Poly Auction	China
Yun Shouping	Landscape	$12.4	Poly Auction	China
Wu Zhen	Ink Bamboo	$11.8	Poly Auction	China
Zhu Da	Album Of Nature	$9.9	China Guardian	China
Wang Hui	The Kangxi Emperor's Southern Inspection Tour, Section Of Scroll Vi	$9.5	Sotheby's	US
Tang Yin	Calligraphy In Running Script	$8.7	China Guardian	China
Pieter Brueghel the Younger	The Four Seasons	$8.3	Christie's	UK
Jin Nong	Yi Hai as Floral Album	$7.4	China Guardian	China
Sun Junze	Landscape	$6.8	Beijing Council	China
Chen Hongshou	Birds And Flowers	$6.7	Beijing Council	China
Zhu Da	Flower And Bird	$6.4	China Guardian	China
El Greco	The Entombment Of Christ	$6.1	Christie's	US

ii. European Old Masters

Artist	Lot Title	Price ($m)	Auction House	Sale Region
Peter Paul Rubens	Lot And His Daughters	$57.9	Christie's	UK
Orazio Gentileschi	Danaë	$30.5	Sotheby's	US
John Constable	View On The Stour Near Dedham	$19.0	Christie's	UK
Pieter Brueghel the Younger	The Four Seasons: Spring; Summer; Autumn; And Winter	$8.3	Christie's	UK
El Greco	The Entombment Of Christ	$6.1	Christie's	US
Jean-Étienne Liotard	A Dutch Girl At Breakfast	$5.7	Sotheby's	UK
Jean de Cambrai	Deux Pleurants En Marbre Sculpte Provenant Du Cortege Funeraire Du Tombeau De Jean De	$5.7	Christie's	France
Valentin de Boulogne	The Crowning With Thorns	$5.2	Sotheby's	US
After Sir Joshua Reynolds	Portrait Of Lucy Long	$5.1	Christie's	UK
Jan Brueghel the Elder	Still Life Of Flowers In A Stoneware Vase	$5.0	Sotheby's	UK
Michaelina Woutiers	Portrait Of Martino Martini, Jesuit Missionary In China	$4.9	Koller	Switzerland
Jacob Jordaens the Elder	Saint Martin Healing The Possessed Man	$4.7	Sotheby's	US
Bernardo Bellotto	Venice: The Entrance To The Grand Canal; And The Grand Canal From The Ca' Da Mosto To The Fabbriche Nuove, With The Rialto Bridge	$4.6	Christie's	UK
George Stubbs	Two Hunters With A Young Groom And A Dog By A Lake	$4.1	Christie's	UK
Bernardo Daddi	The Madonna And Child Enthroned With Saints	$3.9	Christie's	US
Raphael	Profile Portrait Of Valerio Belli, Bust Length, Facing Left	$3.3	Sotheby's	US
Thomas Gainsborough	The Blue Page	$3.3	Sotheby's	US
Bernardo Bellotto	Venice, A View Of The Grand Canal Looking East From The Campo Di San Vio, To The Left The Palazzo Correr	$3.0	Sotheby's	US
Pieter Jansz Saenredam	The Town Hall At Haarlem With The Entry Of Prince Maurits To Replace The Governors In 1618	$3.0	Sotheby's	US
Jan Cornelisz Vermeyen	Portrait Of Joost Aemszoon Van Der Burch	$2.7	Christie's	US

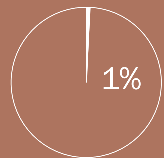


6

Global Wealth and the Art Market

Key Findings

Global Wealth and the Art Market



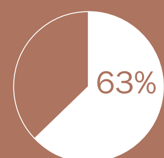
The top 1% of wealth holders in 2016 owned just over half of the world's total household wealth, while the least wealthy half of the global adult population collectively owned less than 1% of global assets.

398 m

Art collectors tend to be found predominantly in the wealth brackets above $100,000. This segment has increased from 217 million people in 2000 (6% of the world's adults) to just under 398 million (8%) in 2016, with the US accounting for the largest share of adults in this wealth bracket at 23%.

$117 t

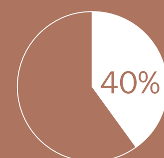
There were an estimated 32.9 million millionaires worldwide in 2016, down 2% in number year-on-year but with wealth advancing 3% to $117 trillion.



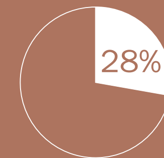
The five largest art markets in 2016 (the UK, US, China, France and Germany) accounted for a combined 63% share of the world's millionaire population.

↑20 m

The regional origins of millionaires have changed significantly. 20 million new millionaires have emerged since 2000, and most have come from new and developing economies, with China's millionaire population growing to 45 times its size.



A survey of US-based HNWIs by UBS and Arts Economics in 2016 revealed that 40% were active in the art and collectibles market in the last two years.



The most popular category of purchases was jewelry, gems and watches, with fine art the third most popular, with 28% of HNWIs having purchased art over the last two years.

12%

12% of US HNWIs had spent over $50,000 on art and collectibles in the last two years and 3% had spent over $1 million.

1.1 m

An estimated 1.1 million US-based HNWIs purchased works of art or antiques in the market in the last two years.

6.1 | The Economic Context in 2016

Changing patterns of wealth distribution in the global economy have a significant effect on the level and distribution of art sales. Sales and prices at the high end of the market are driven by high net worth individuals (HNWIs) buying domestically and globally in both emerging and mature economies. The middle and upper income segments are also supporting a large volume of sales throughout other sectors of the market.

The concentration and growth of wealth in the expanding segment of global HNWIs has undoubtedly been beneficial for the art market in recent years, boosting sales at the high end of the market, which have bolstered aggregate measures of the market's strength. However, in some regions, middle and upper-middle income groups have seen a significant contraction in their share of wealth, particularly since the global financial crisis, undoubtedly putting pressure on the middle market for art and antiques, which is a critical part of the market's infrastructure. These wider trends in wealth distribution have direct and long-term effects on the art market over time, and it is therefore informative to analyze changes over 2016 and going forward.

The global financial crisis undoubtedly **put pressure on the middle market** for art and antiques, which is a critical part of the market's infrastructure.

Growth in the global economy slowed over 2016, despite a promising start to the year, as political and economic factors continued to subdue the nearly decade-long recovery from the global financial crisis. While the world economy continued to expand in 2016, annual growth rates have decreased in recent years. World GDP averaged per annum growth of 4.5% from 2000 to 2007, and while there was a strong start to the recovery after the global financial crisis in 2009, growth has since slowed, falling for a third consecutive year and averaging just 3.2% in 2016 (and under 2% in the advanced G7 and Eurozone economies). The outlook for 2017 and beyond also remains subdued, with economists warning of the dangers of persistent low growth taking hold as progress in different regions remains moderate and uneven.

While there remains considerable differences between regions, the global situation has been characterized by a combination of low growth, weak investment, persistent deflationary pressures and geopolitical and economic instability. Apart from long-term factors such as changes in demography and productivity growth, unexpected shocks such as the outcome of the UK vote on Brexit and the US election led to a deterioration in growth expectations in 2016 as uncertainty rose, taking a toll on investment and market sentiment in some areas. Although the outcomes from these events are still unfolding and financial markets rallied strongly at the start of 2017, there are worries that over the longer-term, these new political realities may signal reduced consensus on the benefits of cross-border economic integration and could lead to inward-looking protectionist policies.

While policy makers have been more successful in keeping the recession in check directly after the global financial crisis of 2008 than after other major historical contractions, the stagnation of growth in many major economies in the last few years has created a backlash against globalization and the freer movement of goods, services, capital, labor, and technology that came with it. In the political arena, this has spurned the rise of populist anti-globalization, anti-immigration parties, with the poor recovery providing an opportunity to blame foreign trade and foreign workers for the continued malaise. This has led to increasing pressure towards protectionist policies including increased trade and labor barriers and asset protection. Cross-border trade in goods and services has already slowed due to weak economic activity and investment, and is now growing at its slowest rate for the last ten years at just over 2% for imports and exports. There are concerns that this could worsen if trade liberalization wanes and protectionist policies limit further growth. These policies may have both a direct impact on the cross border trade in the global art market, as well as indirect effects via their impact on global wealth and its distribution.

Alongside these wider risks, in many economies central banks are also reaching the limits of their expansionary monetary policy tools after eight years of quantitative easing since the global financial crisis. Oil and commodity prices are at their lowest level since 2006. This has disproportionately hurt emerging economies, which in recent years have been the main contributors to global economic growth as well as critically important bases for new buyers in the global art market. Although prices are expected to recover, economies such as Russia and Brazil remained in recession in 2016, while others slowed year-on-year.

China's active fiscal policies have kept its growth one of the highest worldwide (at 6.6% in 2016). However, this is the sixth year of slowing growth for China, as ongoing rebalancing continues to take a toll. Supply side reforms and the continuing challenges of restructuring mean that growth is likely to continue to slow, although it will remain significantly above Western economies.

In the advanced economies, significant progress has been made in repairing some of the major economic damage from the global financial crisis, but progress has been uneven. In some Euro-area countries in particular, domestic demand and investment are still significantly below their pre-crisis levels, and even in the major economies such as the US and UK, growth slowed over 2016 and remains below 2%.

While the US witnessed a slowing in growth from 2015 to 2016, it is expected to improve in 2017. These forecasts are supported to some extent by the new administration's signaling of a large "self-financed" fiscal stimulus, changes in tax policies and some backtracking on major disruptive policies related to trade and immigration. However, threats still loom regarding protectionist policies, which are limiting forecasts of growth over the longer-term. While the UK economy was supported immediately post-Brexit with a rebound in exports as the value of Sterling fell, political uncertainty stemming from the referendum is likely to continue to deter investment, and growth is expected to decelerate in 2017. The effects of these new political realities on economic growth and its prospects all potentially impact on the perceptions of art buyers and sellers in these key market hubs, and are likely to trickle down to market sales in different ways.

The effects of new political realities on economic growth and its prospects potentially impact the perceptions of art buyers and sellers in these key market hubs, and are likely to trickle down to market sales in different ways.

Table 6a | Growth in GDP per annum, constant prices (%)

Country	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017e	2021e
China	12.7	14.2	9.6	9.2	10.6	9.5	7.9	7.8	7.3	6.9	6.6	6.2	5.8
Indonesia	5.5	6.3	7.4	4.7	6.4	6.2	6.0	5.6	5.0	4.8	4.9	5.3	6.0
Sweden	4.7	3.4	–0.6	–5.2	6.0	2.7	–0.3	1.2	2.3	4.2	3.6	2.6	2.0
Spain	4.2	3.8	1.1	–3.6	0.0	–1.0	–2.6	–1.7	1.4	3.2	3.1	2.2	1.6
Australia	2.7	4.5	2.6	1.8	2.3	2.7	3.6	2.0	2.7	2.4	2.9	2.7	2.8
Qatar	26.2	18.0	17.7	12.0	19.6	13.4	4.9	4.6	4.0	3.7	2.6	3.4	2.0
UAE	9.8	3.2	3.2	–5.2	1.6	4.9	7.1	4.7	3.1	4.0	2.3	2.5	3.4
Mexico	5.0	3.1	1.4	–4.7	5.1	4.0	4.0	1.4	2.2	2.5	2.1	2.3	2.9
UK	2.5	2.6	–0.6	–4.3	1.9	1.5	1.3	1.9	3.1	2.2	1.8	1.1	1.9
Germany	3.9	3.4	0.8	–5.6	4.0	3.7	0.7	0.6	1.6	1.5	1.7	1.4	1.2
Singapore	8.9	9.1	1.8	–0.6	15.2	6.2	3.7	4.7	3.3	2.0	1.7	2.2	2.6
Netherlands	3.5	3.7	1.7	–3.8	1.4	1.7	–1.1	–0.2	1.4	2.0	1.7	1.6	1.6
US	2.7	1.8	–0.3	–2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6	2.2	1.6
Belgium	2.5	3.4	0.7	–2.3	2.7	1.8	0.2	0.0	1.3	1.4	1.4	1.4	1.5
Hong Kong	7.0	6.5	2.1	–2.5	6.8	4.8	1.7	3.1	2.7	2.4	1.4	1.9	2.9
Austria	3.4	3.6	1.5	–3.8	1.9	2.8	0.8	0.3	0.4	0.9	1.4	1.2	1.1
France	2.4	2.4	0.2	–2.9	2.0	2.1	0.2	0.6	0.6	1.3	1.3	1.3	1.8
Saudi Arabia	2.8	1.8	6.3	–2.1	4.8	10.0	5.4	2.7	3.6	3.5	1.2	2.0	2.3
Canada	2.6	2.1	1.0	–3.0	3.1	3.1	1.7	2.2	2.5	1.1	1.2	1.9	1.9
Switzerland	4.2	4.1	2.2	–2.1	2.9	1.9	1.1	1.8	1.9	0.8	1.0	1.3	1.7
Norway	2.4	2.9	0.4	–1.6	0.6	1.0	2.7	1.0	2.2	1.6	0.8	1.2	2.1
Italy	2.0	1.5	–1.1	–5.5	1.7	0.6	–2.8	–1.7	–0.3	0.8	0.8	0.9	0.9
Japan	1.7	2.2	–1.0	–5.5	4.7	–0.5	1.7	1.4	0.0	0.5	0.5	0.6	0.6
Greece	5.7	3.3	–0.3	–4.3	–5.5	–9.1	–7.3	–3.2	0.7	–0.2	0.1	2.8	1.8
Russia	8.2	8.5	5.2	–7.8	4.5	4.0	3.5	1.3	0.7	–3.7	–0.8	1.1	1.5
Argentina	8.0	9.0	4.1	–5.9	10.1	6.0	–1.0	2.4	–2.5	2.5	–1.8	2.7	3.3
Brazil	4.0	6.1	5.1	–0.1	7.5	3.9	1.9	3.0	0.1	–3.8	–3.3	0.5	2.0
World	**5.5**	**5.7**	**3.0**	**–0.1**	**5.4**	**4.2**	**3.5**	**3.3**	**3.4**	**3.2**	**3.1**	**3.4**	**3.8**

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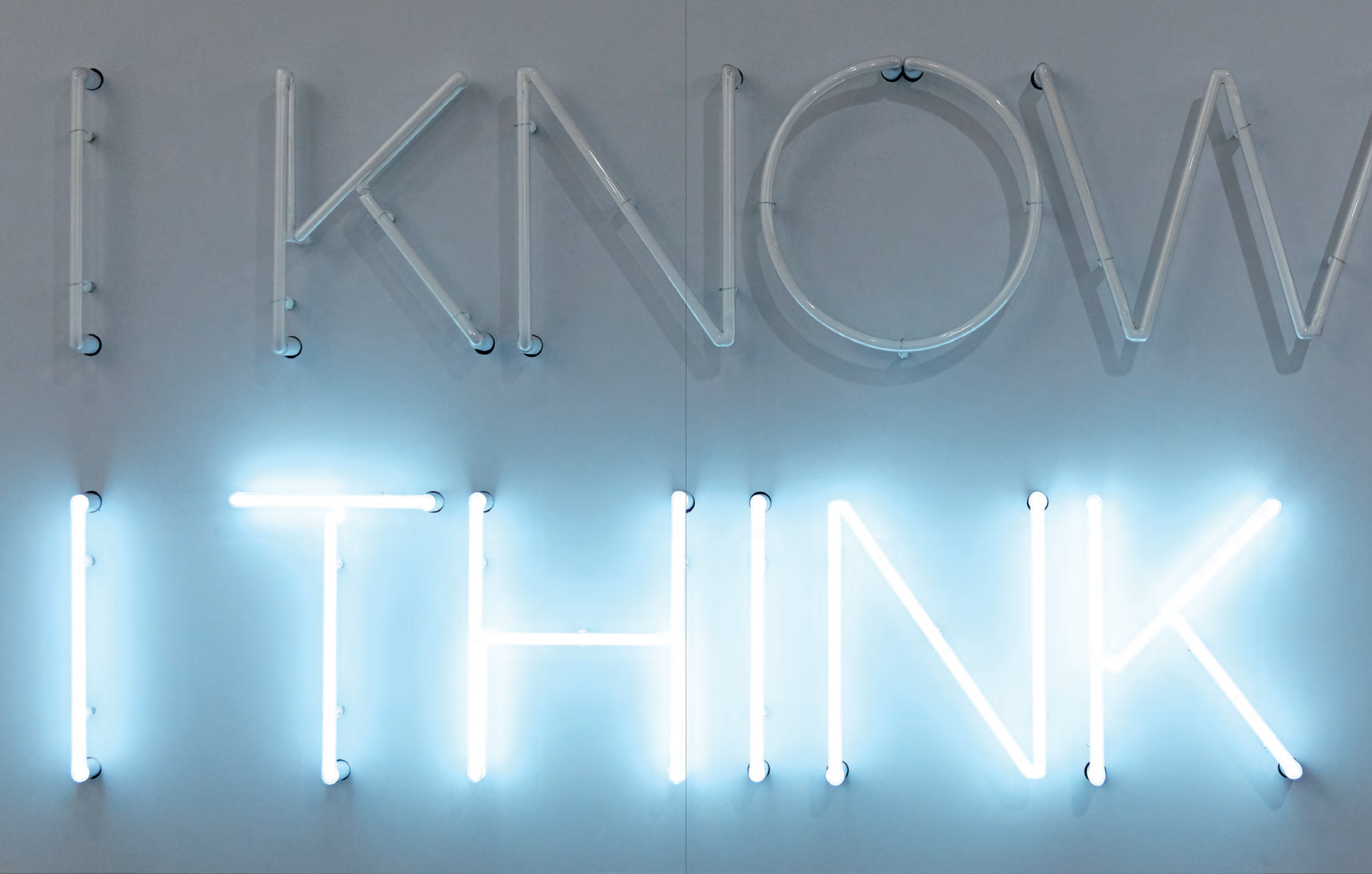
How economic growth filters down to a nation's population is a critical measure of general economic well-being and a nation's ability to support a healthy art market. Despite superior growth in GDP in economies such as China over the last ten years, GDP per capita remains much lower than markets in Europe and the US. As a result, in China and other emerging markets, occasional or regular purchases of art and luxury products are still out of reach for a majority of the population. Despite a growing number of wealthy inhabitants, average incomes in China in 2016 remained less than one-quarter of the average in the EU and less than 15% of those in the US.

A very positive trend for China and other emerging and developing markets, particularly those in Asia, is that despite their current lower level, GDP per capita has been growing at much faster rates than in advanced economies. GDP per capita in China has risen by more than 290% in the last ten years versus a relatively modest 24% in the US. GDP per capita in emerging and developing Asia grew at just over 123% from 2006 to 2016, five times as fast as the average rate of growth in the EU or the G7 economies. Growth over the next five years is also expected to be more than twice the rate in these regions and, therefore, although the gap between per capita incomes between countries remains wide, it is gradually narrowing, improving the potential for the development of greater depth in their national art markets.

GDP per capita in China has risen by more than **290%** in the last ten years versus a relatively modest **24%** in the US.

Table 6b | GDP per Capita – Selected Countries

		Growth (%) in USD			Growth (%) in Own Currency		
Country	**2016**	**2015–2016**	**2006–2016**	**2016–2021 Forecast**	**2015–2016**	**2006–2016**	**2016–2021 Forecast**
Switzerland	$79,578	1%	38%	9%	2%	8%	6%
Norway	$71,497	1%	–3%	10%	3%	27%	18%
Qatar	$60,733	6%	–3%	36%	6%	–3%	36%
US	$57,294	3%	24%	19%	3%	24%	19%
Singapore	$53,053	2%	58%	15%	3%	36%	14%
Sweden	$51,604	1%	12%	9%	3%	28%	16%
Australia	$51,593	3%	36%	20%	4%	37%	18%
Netherlands	$45,210	3%	2%	18%	3%	14%	15%
Austria	$44,561	2%	10%	14%	2%	24%	11%
Hong Kong	$42,963	4%	53%	22%	4%	53%	19%
Germany	$42,326	3%	16%	17%	3%	30%	14%
Canada	$42,319	2%	5%	18%	3%	21%	16%
Belgium	$41,491	2%	6%	13%	2%	20%	10%
UK	$40,412	3%	–8%	10%	3%	23%	16%
France	$38,537	3%	2%	16%	3%	14%	12%
UAE	$38,050	4%	–14%	22%	4%	–14%	22%
Japan	$37,304	2%	9%	21%	2%	0%	9%
Italy	$30,294	2%	–10%	11%	2%	2%	8%
Spain	$27,012	3%	–5%	21%	3%	6%	17%
Saudi Arabia	$19,922	3%	28%	21%	3%	28%	21%
Greece	$18,078	4%	–27%	27%	4%	–18%	23%
Argentina	$12,425	7%	108%	47%	12%	904%	126%
Russia	$8,838	5%	19%	42%	6%	196%	34%
Mexico	$8,699	5%	–2%	26%	6%	62%	28%
Brazil	$8,587	4%	45%	26%	6%	133%	35%
China	$8,261	9%	291%	56%	8%	223%	43%
Indonesia	$3,636	9%	106%	40%	9%	200%	52%


I KNOW
I THINK

6.2 | World Wealth

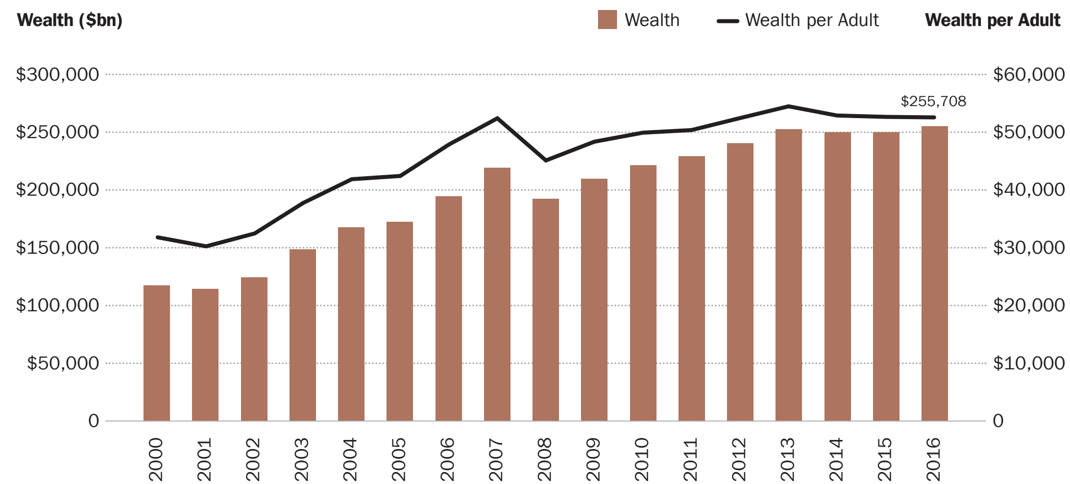
While the overall economic situation remained mixed, aggregate world wealth increased slightly in 2016, reaching an estimated $256 trillion[31]. Figure 6a shows that in the post-millennium, pre-crisis years, world wealth boomed, with double-digit growth rates in several years and regions such as China more than doubling their aggregate wealth. The financial crisis abruptly halted this ascent, with global wealth falling 14% in 2008. While there was general optimism about a robust recovery as growth rates returned quickly in 2009, despite some early progress, the sustained high trajectory has not been re-established, and the last three years have seen a particularly low and sluggish expansion in wealth, barely keeping pace with the rising adult population numbers. While aggregate wealth has succeeded in recouping its losses post-crisis, growth has been much slower, averaging less than 2% per annum to date from 2007.[32] While global wealth edged up just over 1% in 2016, the growth in the adult population was marginally higher, resulting in stagnant wealth per adult (contracting 0.1% to $52,819, the third year of decline). In the last ten years, the 30% rise in world wealth has far outpaced the 11% rise in wealth per capita, and the distribution of that wealth has become increasingly unequal.

The geographical distribution of aggregate wealth remains dominated by the US, which accounts for more than one-third of the world's household wealth, despite a share of just 5% of the global adult population. China accounts for the next highest share of wealth (10%), but with a much greater share of the world's adults (21%). While China's aggregate wealth fell 3% year-on-year in US dollar terms, growth over the longer-term has been substantial. From 2000, when its share of world wealth was just 4%, China's wealth has experienced an average rate of growth of 11% per annum to 2016.

Latin America's share of the world's adult population more than doubles its share of world wealth, but for regions such as Africa and India, however, the population share exceeds the wealth share by a factor of more than ten. The Asia-Pacific region accounted for 21% of world wealth in 2016 and showed among the highest rates of growth in wealth (at over 8% year-on-year), boosted by strong growth in Japan, with a large rally of the Japanese Yen. Combined with China, therefore, Asia accounted for 30% of world wealth, spread over 45% of the world's adults. However, the majority of world wealth still resides in Europe (29%) and North America (36%), despite the fact that they account for only 18% of global adults by number.

31 Estimates for aggregate global wealth are from Credit Suisse (2016) *Global Wealth Databook*, 2016, and are measured here at current exchange rates.
32 It is worth noting that the 1% annual rise in wealth is measured in US dollars using current exchange rates. This increases to 3% when exchange rates are held constant as currency fluctuations did affect some regions more dramatically, with negative effects in countries such as the UK and China, and positive effects in Japan.

Figure 6a | Growth in Global Wealth and Wealth per Adult ($)



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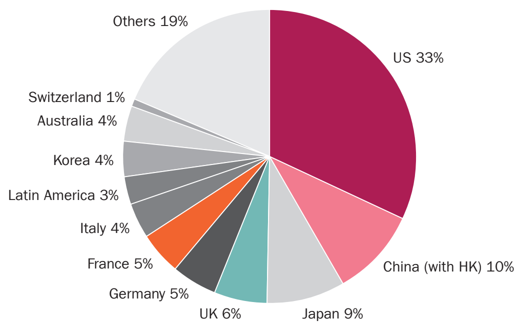
The geographical distribution of aggregate wealth remains dominated by the US, which accounts for more than **one-third** of the world's household wealth.

This strong base of wealth, especially in the US, has helped to sustain a healthy market for art and antiques supported by both local and international buyers.

The slowdown of the global economy and likelihood of interest rates rises means that forecasts in the growth of wealth over the next few years are moderate. Unlike the pre-crisis period where world wealth grew at close to 10% per annum, growth is likely to continue at a positive but much slower trajectory for the next five years. While the rates of growth are likely to remain faster in the emerging and Asian economies, the US is likely to remain the largest center of wealth worldwide by a considerable margin.

Figure 6b | Global Share of World Wealth in 2016 (Share of US Dollar Value in %)



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The top 1% of wealth holders in 2016 owned just over half of the world's total household wealth.

6.3 | Wealth Distribution

Beyond variations in aggregate wealth, changes in the wealth distribution across individuals are arguably more important for the art market and its regional performance.

Estimates from Credit Suisse and other sources suggest that the least wealthy half of the global adult population collectively owns less than 1% of global wealth, while the richest 10% owns close to 90% of global assets. The top 1% of wealth holders in 2016 owned just over half of the world's total household wealth.

The dominance of wealth at the top and population at the bottom of the wealth spectrum has been a stable trend over the last few years. However, the extent of inequality has been slowly edging upwards. In 2011, those with personal wealth of over $1 million accounted for 38% of the world's wealth, but this rose to 46% in 2016. Similarly the share of the population in the lowest wealth group (with individual wealth less than $10,000 each) has expanded from 68% in 2011 to 73% in 2016.

Art collectors tend to be found predominantly in the wealth brackets above $100,000, and this segment has increased over time from 217 million people in 2000 (or 6% of the world's adults) to just under 398 million (8%) in 2016. The US

Figure 6c | The Distribution of World Wealth in 2016

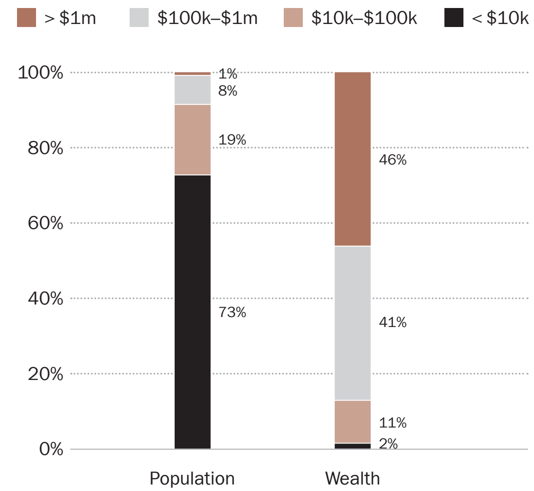

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Table 6c | **Share of National Population by Wealth Level in 2016**

Country	<$10k	$10k–$100k	$100k–$1m	>$1m
Switzerland	21.1%	13.6%	53.7%	11.6%
Australia	11.1%	33.2%	49.6%	6.2%
US	34.6%	28.6%	31.3%	5.5%
UK	21.6%	27.0%	46.8%	4.5%
Sweden	30.9%	36.9%	28.4%	3.8%
Singapore	17.6%	32.2%	46.5%	3.6%
France	26.1%	23.9%	46.7%	3.3%
Japan	9.3%	35.5%	52.5%	2.7%
Germany	31.0%	33.7%	32.9%	2.4%
Italy	22.7%	26.1%	49.0%	2.3%
Spain	19.0%	54.4%	25.5%	1.0%
China	67.8%	29.3%	2.7%	0.2%
Brazil	72.9%	25.2%	1.8%	0.1%
Indonesia	84.3%	14.7%	1.0%	0.1%
Russia	93.6%	5.7%	0.6%	0.1%
India	96.2%	3.5%	0.3%	0.02%
Europe	48.7%	26.7%	22.9%	1.7%
Asia-Pacific	74.6%	16.2%	8.7%	0.5%
Latin	69.8%	28.1%	2.0%	0.1%
Africa	93.9%	5.7%	0.4%	0.02%
World	**73.2%**	**18.5%**	**7.5%**	**0.7%**

accounted for the largest share of adults in this wealth bracket at 23%, followed by Japan (14%), China (8%) and the UK, France and Germany with 6% each.

In many developed economies such the US and the larger markets in Europe, one-third to over a half of the adult population lies in the bracket above $100,000. In the BRIC and developing regions, however, despite rapid advances in aggregate wealth, most of the population has wealth of less than $10,000. In all countries, the share of the population with wealth in excess of $1 million is a small minority.

Table 6d shows that, with the exception of Japan, the top 10% of wealth holders controls a disproportionally large share of national wealth. The top 1% of the world's population owned 51% of its wealth in 2016 versus only 11% for the bottom 90%. The proportion of wealth owned by the top 1% is most skewed in countries such as Russia and India, but also high in the US, China and Brazil. In all of the countries shown, again with the exception of Japan, the bottom 90% of the population owns a minority share of the nation's wealth.

While the share of wealth in the top segments fell slightly between 2000 and 2007, this has reversed since the global financial crisis and the economic

Table 6d | **Share of National Wealth in 2016**

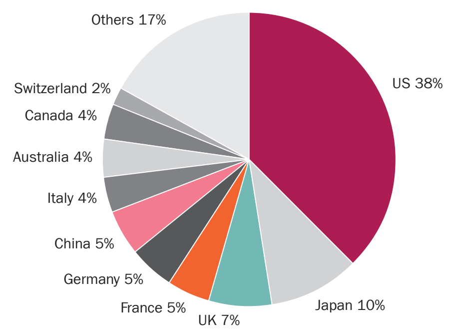
Country	Bottom 90%	Top 10%	Top 1%
Russia	11.0%	89.0%	74.5%
India	19.3%	80.7%	58.4%
Indonesia	24.3%	75.7%	49.3%
Brazil	25.8%	74.2%	47.9%
China	26.8%	73.2%	43.8%
US	22.4%	77.6%	42.1%
Sweden	27.6%	72.4%	35.9%
Singapore	37.4%	62.6%	33.0%
Germany	35.1%	64.9%	31.50%
Spain	43.8%	56.2%	27.4%
Canada	42.2%	57.8%	25.6%
Italy	45.3%	54.7%	25.0%
France	43.6%	56.4%	24.8%
Switzerland	43.5%	56.5%	24.8%
UK	43.4%	56.6%	23.9%
Australia	47.3%	52.7%	22.0%
Japan	51.6%	48.4%	18.5%
Africa	17.4%	82.6%	51.3%
Latin America	28.8%	71.2%	42.0%
Asia-Pacific	13.7%	86.3%	40.4%
Europe	28.9%	71.1%	32.7%
World	**10.9%**	**89.1%**	**50.8%**

recovery has been shallow, with some layers of society not recovering as well as others. Projections over the next five years show little change in the breakdown of the top tiers, with expectations that they will continue to dominate wealth holdings.

In terms of the regional distribution of the wealthiest 1% of the world's population, the US again dominates, with a share of 38% of the population in this segment in 2016. This share fell 6% year-on-year but there remains a significant margin between the US and other economies in this segment such as Japan (10%), the UK (7%) or China (5%).

Consideration of how these wealth statistics relate to the art market shows, however, that although a high proportion of wealthy individuals is linked with the size of a country's art market, and is a necessary condition for substantial art sales, it is certainly not the only factor that determines their location and development. Many regions have emerged solely as bases for new buyers rather than as sales or trading centers for the market. These new buyers have been active in supporting sales in the traditional art market hubs such as the US and UK, boosting sales in these regions alongside domestic buying. The success of these art market hubs has been based on being able to assemble enough desirable art works for sales

Figure 6d | Share of Global Population of the Wealthiest 1% Worldwide in 2016



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in one place to attract both local and high net worth buyers from around the world.

Japan presents an interesting case, with a very high proportion of wealth but a relatively small art market. Despite this, Japanese buyers have been important in the art market's history, and many dealers have noted the importance of Japanese institutional buying re-emerging in the last two years.

6.4 | Wealth Inequality and the Art Market

These broader wealth trends over time show that globalization has brought about a polarization of incomes in emerging and developing economies while, especially since the global financial crisis, the middle classes in developed economies have become increasingly squeezed as more wealth flows to the top end.

In the economy generally, increasing wealth inequality can have both growth-promoting and growth-inhibiting effects. While most economists agree that some inequality is needed to propel growth, through incentives to entrepreneurship and innovation, the recent rise in inequality has prompted a new look at its economic costs. Inequality can dampen growth through demotivating incentives, particularly as income mobility falls and inherited wealth becomes more dominant and political power more concentrated in the hands of the wealthy. It can also depress aggregate demand, generate greater savings and create investment-reducing social, political and economic instability.

The largest art market, the US, has one of the most skewed distributions of income globally, with levels of inequality in the last ten years reverting to those experienced in the 1920s. There are worries that the concentration of wealth in this small share of the population can limit growth, as more income shifts to the wealthy, who, as noted above, tend to save more and spend less of each marginal dollar, potentially causing consumption and therefore economic growth to decelerate.

There are fears that the concentration of value in global art sales puts the market at risk of becoming polarized and lacking depth.

There are some parallel risks in the art market with some dealers and other experts asserting that the paucity of buyers and sellers at the top end, while good for keeping aggregate figures positive, may have limiting effects if external factors create unfavorable selling conditions. Some also assert that less income in some lower segments of the market could hold back the mid-to-low tier segments of art trade. Some fear that this concentration of value in global art sales puts the market at risk of becoming polarized and lacking depth. While the top end of the market has grown fastest in the last ten years, the decline in the market in 2016 was heavily influenced by an increasing thinness and lack of supply at the highest end, particularly in the auction sector.

Looking at the wider infrastructure of the art market, the strong performance of prices and sales at the top end has also arguably motivated both artists and those collectors seeking financial returns. However, again, the increasingly narrow group of artists achieving success can also be demotivating, particularly as it has few measurable links to quality or other objective characteristics.

As art is a large and relatively infrequent purchase for collectors, many new collectors unfamiliar with the market may attempt to reduce the time spent, search and information costs associated with more traditional forms of connoisseurship and gallery going by only buying well-recognized works or those by famous artists. In doing so, they reduce their own risk through reliance on the established preferences of previous successful buyers. Collectively these risk-reducing techniques tend to reinforce the “superstar phenomenon” in the art market whereby the works of the most famous artists are demanded the most and achieve by far the highest prices in the market. The superstar ethos not only polarizes prices, but can also deprive other artists of the opportunity to work successfully by concentrating demand on just a few successful artists while emerging artists face ever higher hurdles in gaining entry. Auction houses and galleries in the art market can also find it more difficult to sell a wider range of works, due to over-focus on superstar artists, while having collectors all seeking a small and narrow group of famous artists with a limited supply of works can push the prices of this group to increasingly high levels, putting them out of reach of many collectors. These collectors may increasingly get an impression of the art market as being out of their reach entirely, even though there are many other less publicized artists and works that are available at much lower prices.

6.5 | Global Millionaires

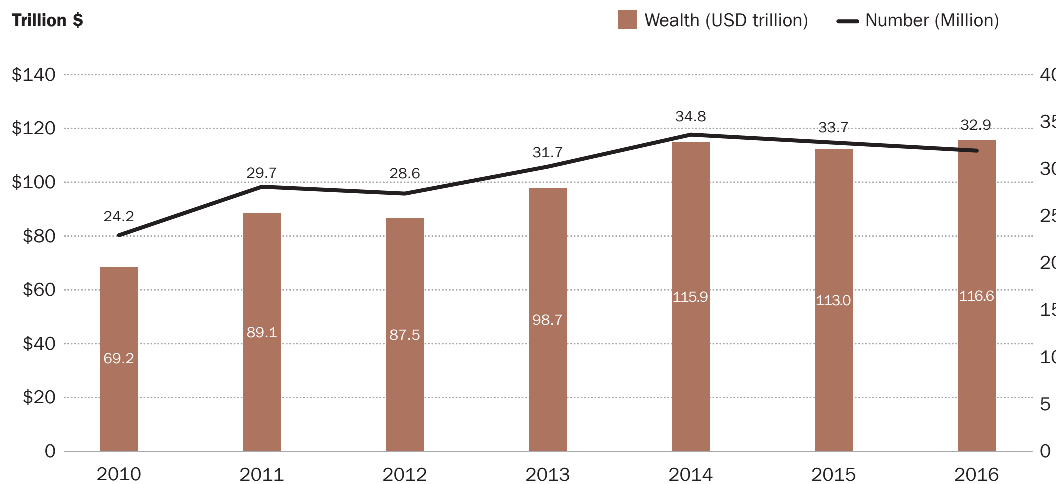
As noted above, art collectors tend to be found predominantly in the wealth brackets above $100,000, and those in the higher end of this wealth segment have had a significant impact on the market. The number of millionaires has increased dramatically since 2000 (rising 155% to 2016) and among them, those with wealth over $50 million have risen the fastest (by over 215%).[33]

In 2016, there were an estimated 32.9 million dollar millionaires[34] worldwide, down 2% in number year-on-year but up 36% since 2010. The wealth of millionaires has increased more rapidly, growing 3% year-on-year to reach $117 trillion, an advance of 68% since 2010.

The five largest art markets in 2016 (the UK, US, China, France and Germany) accounted for a combined 63% share of the world's millionaire population. The US has the most millionaires, by a considerable margin, with 13.6 million, or 41% of the worldwide total. The number of millionaires in any given country is determined by three factors: the size of the adult population, average wealth, and wealth inequality, with all three of these high in the US. Japan's share of global millionaires has fallen in recent years, but the currency appreciation boosted it again to second place in 2016, ahead of the UK (whose millionaire population dropped 15%).

The number of millionaires has increased dramatically since 2000 (rising 155% to 2016) and among them, those with wealth **over $50 million** have risen the fastest (by over 215%).

Figure 6e | Number and Wealth of Dollar Millionaires 2010–2016



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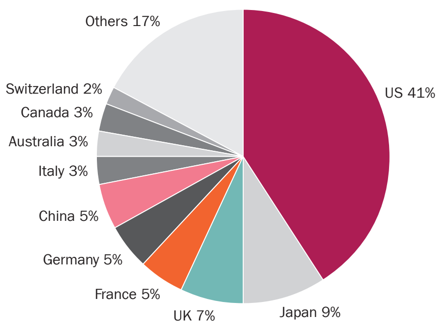
33 While these trends suggest increasing inequality, in this period, they are in fact driven also by the more general context in which the world is becoming wealthier over time and hence the bar for membership to these groups gets lowered.

34 The term "dollar millionaires" is used here to refer to the millionaires segment as set out in Credit Suisse's *Global Wealth Databooks*, dating from 2010 to 2016, which identifies those with net wealth greater than $1 million, with wealth defined as financial assets plus non-financial assets less debts. Non–financial assets include property, land and other physical assets to be considered when defining a millionaire.

Figure 6f | Global Share of Dollar Millionaires in 2016



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The regional origins of millionaires have changed significantly over the last 20 years. In 2000, there was just 12.9 million millionaires in the world and 96% of these were in high income economies. Since then, 20 million new millionaires have emerged and most of these have come from new and developing economies. While emerging economies such as China, Africa and India all started out in 2000 with millionaire populations in the region of 30,000 to 45,000, China's millionaire population has grown to 45 times its size, versus only four to five times in the other regions. (China, including Hong Kong, was home to 1.7 million millionaires in 2016 versus 136,000 and 178,000 in African and India respectively.)

In China, this rapidly increasing millionaire population has been associated with rapidly rising inequality, and China now has more residents with wealth above $50 million and more billionaires than any country bar the US, despite these accounting for less than 0.1% of their population. However, one important factor in China is that although the divide between very high and low wealth in China is increasing, the middle segment is also expanding, with a burgeoning middle class being created on the back of the country's economic growth during the past two decades. Within this segment the upper-middle class is expected to grow the fastest to become the largest segment of the population by 2022.[35] This is by far one of the most important factors for the development potential of China's art and antiques market, with upper middle class consumers stimulating the rapid growth in consumption of luxury goods. Although luxury spending within China was estimated to have declined in 2015, there were signs of this reversing in 2016 and being supported by higher spending by Chinese consumers overseas. A low range of attractive options for investment, combined with a currency that is still not fully convertible, has supported a significant interest in alternative investments, including art and antiques.

20 million new millionaires have emerged since 2000, and most of these have come from new and developing economies.

The increasing international dispersion of millionaires has been reflected in the increasingly geographically diverse base of art buyers supporting the art market in recent years. The widening global spread of high-end wealth has affected the art market's resilience to economic conditions and helped protect it from the downside risk of reliance on a solely US and European buyer base. This was particularly evident in the speed of the market's recovery from the recession of 2009, with a boost in sales from China and the support of international buyers aiding the market's bounce back, versus earlier recessions such as the early 1990s when sales took almost 15 years to re-establish their level.

The changes in the geographic distribution of millionaires have been the most marked for the wealthiest millionaires or ultra-high net worth individuals (UHNWIs), defined here as those with wealth in excess of $50 million. In 2000, emerging economies accounted for 7% of the world's UHNWI population, but this had risen to 18% in 2016. The US has also added twice as many UHNWIs as Europe since 2000 and accounted for 50% of the global population in 2016, with China in second place (8%) followed by Germany (4%). Of the 2,206 billionaires estimated to exist by Credit Suisse in 2016, the US again had the highest share (at 29%

35 Estimates from McKinsey Quarterly 2013.

or 582 individuals), next to China's 244. Europe accounted for 21% of the world's billionaires, with Germany, the UK and France aggregating to an 8% share.

Although estimates of this highest segment's net wealth vary, the *Wealth-X Billionaire Census* published in 2016 estimated that this segment held some $7,683 trillion in total wealth.[36] The estimated average wealth per billionaire was just over $3 billion, although one-third of the wealth in this segment was reported to be held by just 6% of billionaires with holdings in excess of $10 billion each. Although Europe and Asia had larger billionaire populations, North America still maintained the largest share of wealth, at an estimated 33% of the total. However, the most rapid annual growth in wealth was witnessed in Asia, whereas the wealth of European billionaires declined.

A survey of nearly 1,400 billionaires by PWC and UBS noted that, led by China, Asia is creating one billionaire every three days. Unlike Europe and the US where the transfer of assets between generations is important for this segment's growth, in Asia, there is a also a significant number of young, self-made billionaires whose fortunes come directly from technology, consumer and retail industries and property investment.[37]

Table 6e | Billionaire Wealth by Region

Region	Total Wealth ($bn)	Global Share of Wealth	Change Year-on Year	Average Wealth per Billionaire ($bn)
North America	$2,561	33%	8%	$4.1
Latin America and Caribbean	$488	6%	5%	$3.2
Africa	$98	1%	–14%	$2.4
Pacific	$70	1%	–28%	$2.1
Middle East	$450	6%	9%	$2.7
Asia	$1,686	22%	20%	$2.6
Europe	$2,330	30%	–2%	$2.9
Total	$7,683	100%	5%	$3.1

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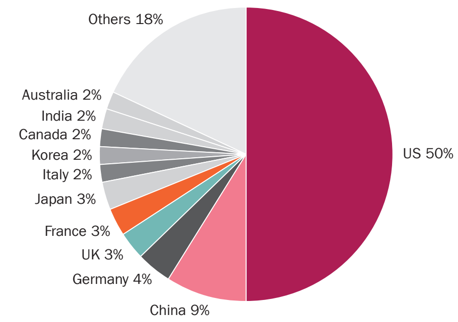
36 The Census reflects data for 2015 and also suggested a slightly higher estimate of the number of billionaires than Credit Suisse at 2,476.
37 UBS and PWC (2016) *Billionaires Insights*.

Although it is impossible to precisely estimate how many billionaires collect art or how much their collections are worth, research has suggested that the majority of billionaires own art, and that many are important and regular collectors. The *Wealth-X Billionaire Census* noted that when asked what their primary passions and interests were, art ranked third (next to philanthropy and travel) and collectibles were ranked tenth.

Estimates are that billionaires' holdings of art average 0.5% of their net worth, but comparing published figures on net worth and the value of art collections, in reality this extends up to at least 10% for some bigger collectors.

Figure 6g | Global Share of Millionaires with Wealth in Excess of $50 million in 2016



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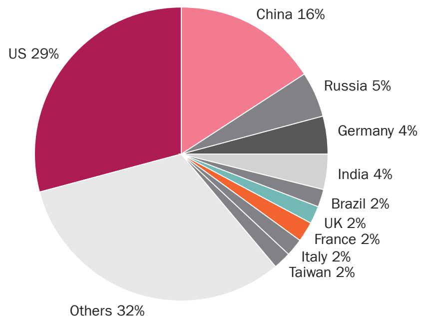
Estimates are that billionaires' holdings of art average **0.5% of their net worth,** but comparing published figures on net worth and the value of art collections, in reality this extends up to at least **10%** for some bigger collectors.

Figure 6h | Global Share of Dollar Billionaires in 2016



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The number of millionaires is expected to continue to grow, with estimates of an increase to over 45 million in the next five years. Assuming certain wealth conditions prevail, it is expected that the number of billionaires could rise to close to 3,000 in the next five years, with around 500 of these additions from China and the US. Growth in the millionaire population in China is expected to be more than double that of the US and Europe, which is likely to boost its place in the global ranks, although it seems unlikely to challenge the US in the near future.

The US market, despite some decrease in the margin of its lead, seems unlikely to decline from the ranks as a leading global center for wealth and for the international art trade. Although the reasons for the success of the US as an art market include its strong cultural infrastructure, business-friendly fiscal environment and liberal trading regime, undoubtedly it is also due to its continuing to be one of the biggest centers of wealth worldwide. The US has by far the highest numbers of HNWIs and UHNWIs, as well as a stronger upper middle class, which gives depth and scope to the market. Cities such as New York are also the temporary home of many global millionaires, and the city attracts these international HNWIs to art sales as a critical mass of the world's greatest art is put on show at auctions, fairs and exhibitions.

6.6 | High Net Worth Wealth

Due to the dominance of the high end of the art market, the buyers that are most influential in shaping trends are the world's wealthiest individuals, plus those with the ability to mobilize purchases within the art market. While the measures used to assess wealth include illiquid assets such as property, an even more core group of potential buyers relevant to the market is those with investable wealth greater than $1 million, or what will be defined here as HNWIs (high net worth individuals)[38]. By the end of 2015, the number of HNWIs was approximately 15.4 million, an advance of 5% over the year. After four years of growth since 2011, this was the highest ever recorded population of HNWIs, and more than double the number of individuals globally in this category in 2000.

The Asia-Pacific region continued to grow the fastest, increasing by over 9% year-on-year to reach 5.1 million and exceeding the HNWI population of North America. The population in North America reached 4.8 million, growing only 2% year-on-year, while Europe's HNWIs grew in number by 5% to 4.2 million. It is estimated that Japan and China alone drove around 60% of the growth in the global population of HNWIs. China's HNWI population grew 16% buoyed by continued GDP growth and despite a volatile equity market, while the improved economic situation in Japan also added to the increase there of 11%. Together, the US, Japan, Germany and China accounted for 61% of the world's HNW population and these four countries accounted for 81% of this group's global population growth.

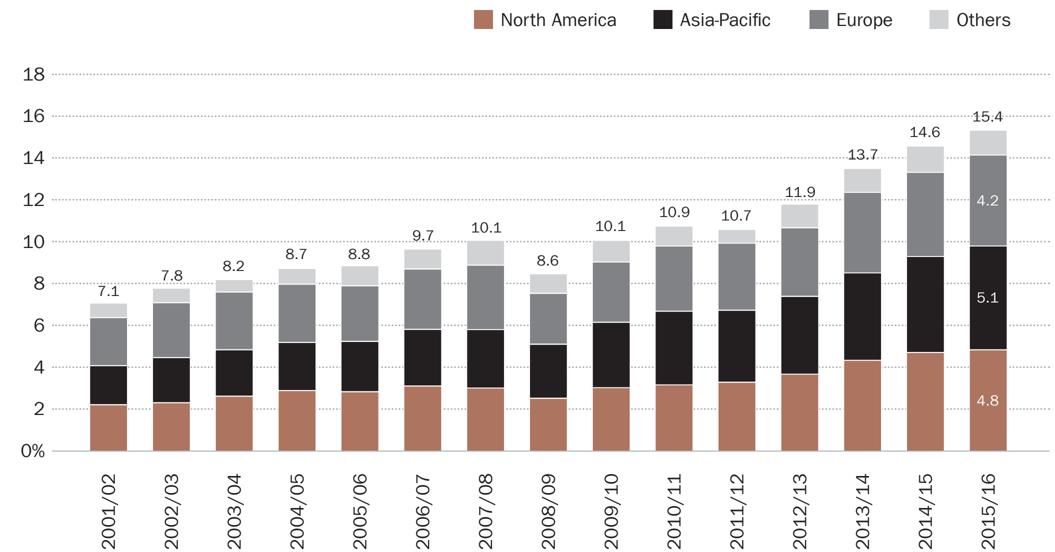
> The US has by far the highest numbers of HNWIs and UHNWIs, as well as a stronger upper middle class, which gives depth and scope to the market.

The biggest loser in terms of the HNW population was Brazil, where political volatility and massive equity declines brought numbers down by 8%, and Russia where they declined by 2%.

The wealth of HNW individuals also increased, reaching $58.7 trillion, its highest level in history, but growing just 4% year-on-year versus a much higher average trajectory of over 7% per annum in the years from 2010 to 2014. UHNWIs accounted

38 This definition of what will be referred to as "HNWIs" in this section is that used in Capgemini/RBC Wealth Management (2016) *World Wealth Report 2016* from which these figures are derived. It measures HNWIs as those with US$1 million or more at their disposal for investing and therefore excludes personal assets and property, collectibles and other consumables.

Figure 6i | **The Total Global Population of HNWIs**



for 34% of the wealth of HNWIs globally and their wealth grew just 2% year-on-year, again due to poor performance in Latin America.

The engine of HNW wealth growth continued to be the Asia-Pacific region, where wealth grew 10% over the year and reached $17.4 trillion, making it the largest region for HNW worldwide and surpassing North America for the first time (with $16.6 trillion). In the US, HNW wealth grew by just under 4%, in Europe by 5%, while in Latin America wealth in the segment decreased 4%.

Despite the global financial crisis, which saw HNW wealth plummet by 25% over 2008-2009, HNW wealth has grown to nearly four times its size over the last 20 years. Expectations are that wealth will continue to rise in this segment, reaching around $106 trillion by 2025 (with a concurrent rise in the population to over 28 million), driven primarily by growth in the Asia-Pacific region. A survey of global wealth managers in 2016 by Capgemini identified that the top four nations they felt would drive high net worth growth to 2025 were the world's three largest art markets: the US, China and the UK, as well as India.[39]

Expectations are that wealth will continue to rise in the HNW segment, reaching around **$106 trillion by 2025** (with a concurrent rise in the population to over 28 million), driven primarily by growth in the Asia-Pacific region.

39 *Capgemini Wealth Manager Survey*, 2016.

Table 6f | High Net Worth Wealth (US$ Trillion)

Wealth (US Trillion $)	Total	North America	Asia Pacific	Europe	Middle East	Africa	Latin America
Forecast 2025	$106.0	$25.7	$42.1	$19.9	$4.4	$2.3	$11.7
2015/16	$58.7	$16.6	$17.4	$13.6	$2.3	$1.4	$7.4
2014/15	$56.4	$16.2	$15.8	$13.0	$2.3	$1.4	$7.7
2013/14	$52.6	$14.9	$14.2	$12.4	$2.1	$1.3	$7.7
2012/13	$46.2	$12.7	$12.0	$10.9	$1.8	$1.3	$7.5
2011/12	$42.0	$11.4	$10.7	$10.1	$1.7	$1.1	$7.1
2010/11	$42.8	$11.6	$10.8	$10.2	$1.7	$1.2	$7.3
2009/10	$39.1	$10.7	$9.7	$9.5	$1.5	$1.0	$6.7
2009/08	$32.8	$9.1	$7.4	$8.3	$1.4	$0.8	$5.8
2008/07	$40.8	$11.7	$9.5	$10.7	$1.7	$1.0	$6.2
2007/06	$37.2	$11.3	$8.4	$10.1	$1.4	$0.9	$5.1
2006/05	$33.5	$10.2	$7.6	$9.4	$1.3	$0.8	$4.2
1995/6	$16.6	$4.4	$3.5	$5.0	$1.1	$0.4	$2.2

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Besides being geographically concentrated, HNWIs tend to share other similarities, both in their consumption and investment behavior. Research has shown that regardless of location, they tend to participate in the same global markets for luxury goods, while their portfolios often focus more heavily on long-term growth investments, with less focus on liquid assets and lower allocations to cash and equities and more to alternative investments[40]. So-called investments of passion have therefore become a core part of many HNWIs' strategy due to their longevity and at times low correlation with other traditional assets in time of economic uncertainty.

40 Ibid. This survey showed that that most HNWIs (48%) favored growth when looking for investments, choosing assets with good long-term growth potential even if they are trading at high prices (versus only 19% preferring a "Buffet-style" value seeker approach of looking for things that are trading below their intrinsic value).

6.7 | A Survey of US HNWIs

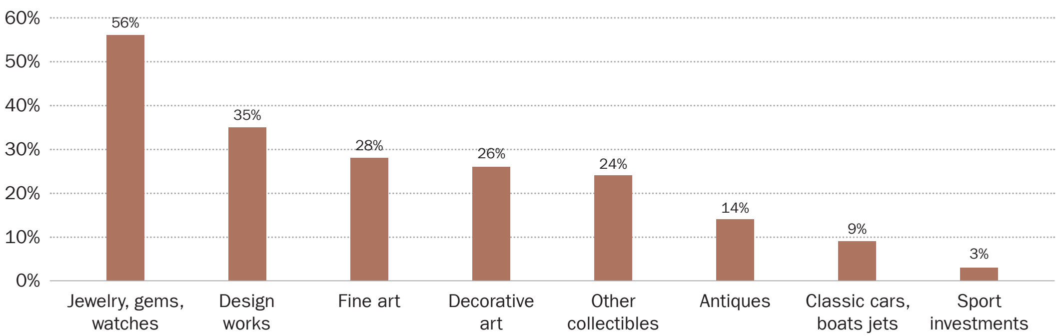
Research has suggested that HNWIs generally allocate an average of up to 10% of their wealth to "investments of passion," although this proportion varies widely between individuals and countries. Within these investments the share of art has varied between 15% to over 25% in recent years, with again a great deal of individual and regional variation.

Precise data on the interaction, spending patterns and preferences of global HNWIs as a group in the art and antiques market is difficult to gather. The analysis of the global distribution of wealth gives some indications of the potential for art sales and expenditures in different regions. However, to more specifically investigate some of the characteristics of art buyers, some useful insights on this group can be gleaned through regional surveys targeted at these wealthiest individuals. In 2016, Arts Economics and UBS surveyed 2,025 HNWIs in the US to investigate their interactions with the art market.

In terms of demographics, the majority of respondents in the sample were aged 50 years and over, with just 10% in younger age groups. However, those active in the art and collectibles market had a slightly higher representation in younger age categories, with 16% in their 20s to 40s. The sample of active collectors were mainly business owners (47%), professionals (19%) or senior executives (14%). All those surveyed had personal assets in excess of $1 million (excluding property and private business assets). The majority (77%) of the active collectors had wealth holdings of between $1 million and $5 million, with 23% with investible assets in excess of $5 million.

To assess if they were active in the art and collectibles markets, respondents were initially asked if they had purchased a range of passion investments including art, antiques and other items in the last two years. Around 40% of the sample had made such a purchase, with the most popular category being jewelry, gems and watches. Fine art was the third most popular with 28% of the sample having bought a work of art over the last two years, followed by decorative art (26%) and other collectibles such as coins and wine (24%).

Figure 6j | Share of Investments of Passion Purchased in the Last Two Years

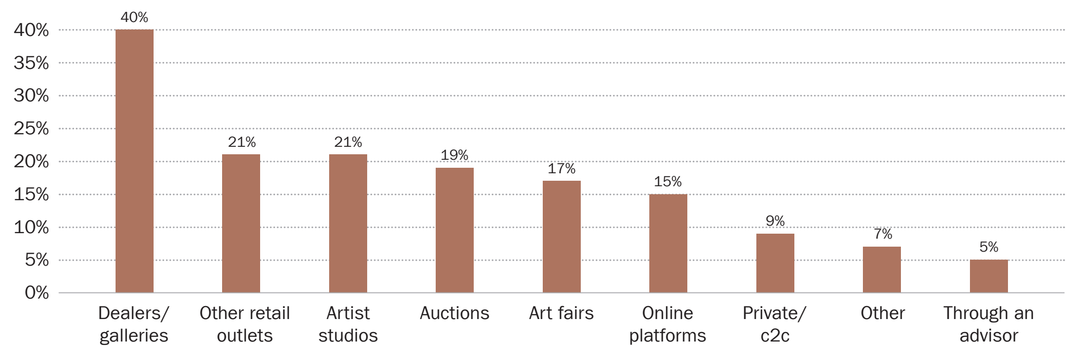


Of those having made a purchase, most (82%) had purchased less than five objects, 15% had purchased between five and ten and just 3% had purchased more than ten. The majority of respondents (88%) had spent $50,000 or less, 8% between $50,000 and $1 million, and 3% had spent over $1 million.

Even in this group of HNWIs, there is a very small proportion of buyers at the highest end of the market. Respondents generally purchased works at the lower-priced end of the market, with 94% most often buying works for less than $50,000 versus just 1% buying at prices over $1 million.

The most popular channel for purchases was through a gallery or dealer, which, combined with purchasing at art fairs, accounted for over half (57%) of responses. 21% of respondents bought directly from artist studios and 19% through auction.

Figure 6k | Channels for Purchasing Art and Collectibles



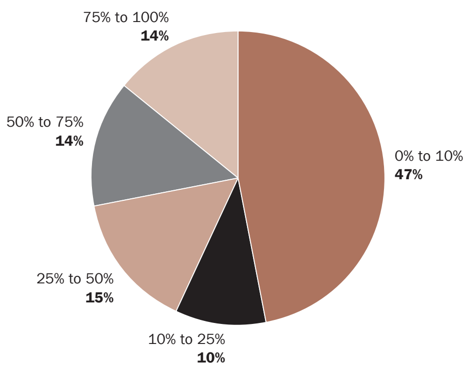
12%

of respondents reported that they had used **credit or loaned funds** to purchase works of art or objects in their collections.

Studies have shown that the use of credit and loaned funds to purchase investments of passion is common among HNWIs.[41] In this sample, 12% of respondents reported that they had used credit or loaned funds to purchase works of art or objects in their collections. The portion of their collections financed by loans was generally low, with just under half of the respondents reporting that it accounted for less than 10% of their total collection.

41 A study by Capgemini and RBC Wealth Management in 2015 discovered that the use of credit in HNW portfolios is widespread, averaging around 18% as a percentage of assets (over $10 trillion). Their Global HNW Insights Survey revealed that 9% of HNWIs held some kind of credit to finance purchases of investments of passion. Applying these shares to the latest figures on the HNWI population indicates that more than 530,000 HNWIs used credit to finance purchases of art, antiques and collectibles in 2016.

Figure 6l | Share of Collection Financed Through Credit



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However, 28% had used debt to finance more than half of their collection, and 14% had financed over 75% of their art works through loaned funds.

Collectors were asked to rank the importance of a number of factors in their decision to purchase works of art or objects for their collection. Aesthetic and decorative considerations were ranked highest, with 62% of the sample considering them extremely or very important (and only 15% rating them as unimportant). Emotional drivers and collecting from a passion for art ranked second, with 78% rating them important (including 48% who felt that they were extremely or very important). Supporting artists and culture was also important for the majority (53%) of respondents. Status and social networking considerations were, however, less of a driver for this group, with 70% and 65% respectively rating them as unimportant.

Regarding its investment potential, 41% of collectors felt that the expected financial appreciation of their investment in the work was important and 34% recognized the risk benefits and potential for portfolio diversification as important. Its function as a hedge against inflation or to protect their capital was rated slightly lower, with just 31% stating this as an important consideration prior to purchase.

Table 6g | Ranking of Considerations when Purchasing Art

Rank	Purchase consideration
1	Aesthetic and decorative considerations
2	Emotional reasons/passion/expression of personality
3	Support of artists and culture/preserving or promoting cultural values
4	Protecting and maintaining family traditions and heritage
5	Expected financial appreciation/return on investment
6	Social/event-driven reasons
7	Portfolio diversification/risk benefits
8	Hedge against inflation/capital protection/value maintenance
9	Status/cultural credibility

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Applying some of these survey results to the wider HNWI populations currently in the US[42], the following estimates emerge:

– Approximately 1.1 million HNWIs had purchased works of art or antiques in the market in the last two years.

– While their involvement varied, 61,855 had spent in excess of $250,000 while around 38,290 spent in excess of $1 million. At the highest end, approximately 4,400 HNWIs had spent in excess of $10 million.

Although the survey findings carry a margin of error when applied to wider population[43], they underline the importance of US buyers in the art market, who account for a large share of sales both locally and internationally. It also suggests that the estimates of the size of global art market sales are conservative, as they are based here only on measurable data from auction sales and polling of dealers and online companies. There is likely to be a significant market of private-to-private sales that are outside the remit of this report at present, but warrant further investigation to establish their size and importance.

42 The *Capgemini World Wealth Report 2016* cited in Section 4.5 estimates that there were 4.4 million HNWIs in the US.
43 The margin of error in this case (for art and antiques purchasers only) is plus or minus 4% at the 95% confidence level.

6.8 | Top 200 Collectors

A geographical trend that helps to illustrate some of the changes in buying at the top end of the market is the location of the top collectors around the world. While there are many cultural, historical, regulatory and other factors that determine where art market sales are centered, the geographical locations of HNWI around the world are critical in determining where the key buyers in the market emerge from. The top private collectors are geographically diverse but *ARTnews* has published a list of the Top 200 Collectors annually since 1990, which allows some comparisons of their changing whereabouts over time.

Table 6h shows the breakdown by country and region from the 1990s to 2016. It clearly shows the dominant position of the US, which was home to the majority of top collectors until very recently, slipping to just under half (49%) in 2016 (down 1% in share year-on-year). The US share has fallen 4% since 2006, mainly due to the growing number of collectors emerging from China and other parts of Asia. Nonetheless the share of US collectors in the list has only fallen 7% since 1990, underlining the consistent importance of the US for high-end buyers.

Top Asian collectors have increased their share and the importance of Mainland China has risen as the key location for these individuals, rather than Japan and Hong Kong, which dominated in the 1990s. In 1990, 18 of the top 200 collectors were Asian, with two-thirds of these being Japanese. By 2006, this had fallen to only four in the top ranks, but expanded again to 21 in 2016, one-third of which were from Mainland China, and the remainder from Japan, Hong Kong, Taiwan, Indonesia and Korea.

While European collectors were well-represented from the mid-1990s, their share has declined by 8% in the last ten years, with the UK, Switzerland and Germany still their main bases.

The key changes in the distribution of global wealth are likely to have a significant impact on the art market over the next decade. Although the position of the US as a key center for HNW wealth and top collectors is unlikely to radically change, the gradual shift of HNW wealth and populations to the Asia-Pacific region is likely to continue to influence where the key centers of buying power are located globally over the next ten years. Just as the dominance of different sectors has changed considerably since the 1990s, it seems likely that regional shifts in key buying bases may not only shift where the value of expenditure stems from, but also the prevailing preferences and types of art purchased in the next 20 years.

Table 6h | Location of Top 200 Collectors

	1990	1995	2006	2016
US	114	94	106	97
Canada	1	7	5	3
North America	**58%**	**51%**	**56%**	**50%**
Brazil	1	1	2	5
Argentina	2	4	1	2
Mexico	3	4	3	3
Other Latin America	2	3	3	2
Latin America	**4%**	**6%**	**5%**	**6%**
China	0	0	0	7
Hong Kong	6	4	0	3
Japan	12	8	2	4
Other Asia	0	1	2	7
Asia	**9%**	**7%**	**2%**	**11%**
UK	12	11	14	12
France	10	17	11	9
Germany	10	17	12	11
Italy	5	9	4	3
Other EU	5	14	18	12
Switzerland	9	4	14	11
Europe	**26%**	**36%**	**37%**	**29%**
Russia	0	0	0	3
Middle East	0	1	2	4
Other	8	1	1	2
Other	**4%**	**1%**	**2%**	**5%**

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7

Economic Impact

Key Findings

Economic Impact

310 k

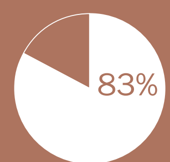
It is estimated that there were around 310,450 businesses operating in the global art, antiques and collectibles market in 2016, including 296,315 in the gallery sector and 14,135 auction houses.

3 m

The art market directly employed an estimated 3 million people in 2016, up 5% year-on-year from 2015.

2.7 m

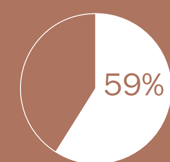
It is estimated that there were more than 2.7 million people employed worldwide in the gallery and dealer sector in 2016 in about 296,315 businesses.



In 2016, 83% of those employed in the dealer sector globally held a university qualification, up 6% on 2015. These education levels are much higher than the general labor force in most countries, with the EU average of 34%, 39% in the US and 43% in the UK.

287 k

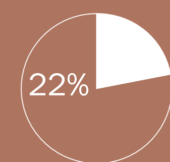
The auction sector employed an estimated 286,960 people worldwide in 2016 in about 14,315 businesses.



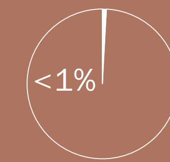
Unlike the wider labor force in many regions, the gender balance in the art market was predominantly female in 2016, with women making up 59% of the dealer workforce, 62% in top-tier auction houses and 54% in the second-tier.

$18 b

It is estimated that the global art trade spent just under $18 billion on a range of external ancillary services directly linked to their businesses, supporting a further 333,920 jobs.



The largest area of spending, although only incurred by dealers, was on art fairs, which represented 22% of the total at $4.0 billion, an advance of 6% year-on-year.



Transactions at the high end make up a tiny portion of the day-to-day activity of the market, with the sales priced at over $1 million accounting for less than 1% of auction or dealer sales in 2016. The majority of business conducted in the art market is at levels below $50,000.

7.1 | Employment in the Art Market in 2016

The global art market makes a significant economic contribution to the economies in which it operates, adding employment, revenues and fiscal contributions, as well as nurturing the development and maintenance of highly specialized skills and knowledge. While the turnover of the market is conservatively estimated at just under $57 billion in 2016, its impact on global economies is much greater through its direct contributions to employment, fiscal budgets, and skills development as well its support of a range of high-value ancillary industries. It also has a wider positive impact in key high-value industries such as cultural tourism, through enhancing a nation's cultural attractiveness and distinguishing its cultural identity.

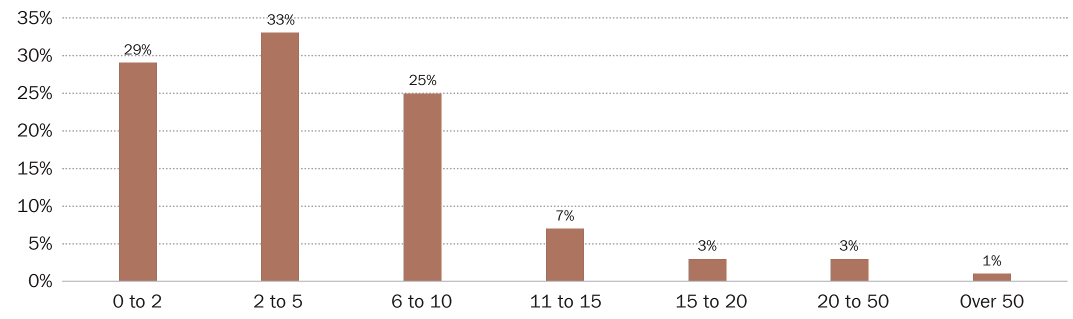
All of these quantifiable economic contributions come alongside the less measurable but highly important benefits the market generates in nurturing a nation's cultural and psychological well-being, helping to define its core identity and supporting it social progress, cohesion, creativity and innovation.

It is estimated that there were around to 310,450 businesses operating in the global art, antiques and collectibles market in 2016. The majority of the companies operating in the market are small businesses (in terms of employees and turnover[44]). The combined employment in the dealer and auction sectors was an estimated 3 million, an increase of around 5% on 2015.

It is estimated that there were around **310,450 businesses** operating in the global art, antiques and collectibles market in 2016.

44 A small business is defined as one with turnover less than €10 million and staff headcount of less than 50 (in Europe by Europa), and in the US, for art dealers, with a turnover less than $7.5 million (by the US Small Business Administration).

Figure 7a | Numbers Employed in the Dealer Sector in 2016



7.2 | Dealer Sector Employment

It is estimated that there were more than 2.7 million people employed worldwide in the gallery and dealer sector in 2016 in about 296,315 businesses.

While there are a number of global, multi-premises businesses in this sector, most art and antique dealers are small to medium-sized enterprises. Based on the surveys of the sector in 2016, the average number of employees per business was seven people, with a median of four (both down by one person on the results reported in 2015). Businesses surveyed ranged from sole traders to those with up to 150 employees. Around 29% of the total businesses surveyed were sole traders or in partnerships of just two people, while 18% employed ten or more people.

Employment varies somewhat by sector. Fine art dealers tended to employ larger numbers, with an average of seven versus just three in the decorative art and antiques sector. Within fine art, Contemporary dealers employed the most people on average (eight people), followed by dealers in the Modern and Impressionist sectors (five), while the average for Old Master dealers was four.

There were also some differences in employment numbers between countries. Excluding multinational businesses, the average number of employees in the US was higher than the international average at 12, as was the average in China at nine people. Other smaller, relatively newer markets such as Brazil also had high numbers employed, with an average of 15, more than double the global mean, and consistent on 2015. In Europe, on the other hand, numbers employed were slightly lower, with an EU average of five, and an average of six in both the UK and France.

The majority of businesses (63%) maintained stable employment numbers year-on-year, 27% increased the numbers employed (on average by two people), while 6% experienced a decline in numbers (on average by one person).

Unlike the wider labor force in many regions, the gender balance in the dealer sector was predominantly female in 2016, with women making up 59% of the workforce, up 4% on 2015. This is in contrast to gender ratios in the wider labor force in most countries, which tend to favor male participation (for example a 47% share of female employment in the US in 2016 and 46% in the EU).[45]

In terms of the age structure of the sector, there is a relatively high proportion of older employees compared to some regional averages. In 2016, 7% of those employed in the gallery sector were aged 65 years or more. In the EU, the average of those employed at over 65 in 2016 was 2%, and ranged from as low as 1% in France to 4% in the UK. However, it is on par with averages in other regions such as the US where at the end of 2016, 6% of the labor force was over 65. There was also a higher proportion of younger people employed in the sector, with 56% of the labor force aged between 15 and 39 years. This was considerably higher than the EU average of 42% in 2016, and even the UK, at 46%.[46]

The survey showed that the rate of female participation in the sector does decline with age. The highest proportion of female employment is in the 15 to 39 years segment at 66%, whereas the middle segment (40 to 64 years) is more gender-balanced, and the 65 plus segment more in line with averages in other industries.

45 General labor market data for the US is from the US Bureau of Labor Statistics and based on the civilian labor force aged over 16 years in 2016. Data for the EU is from the *Eurostat Labor Force Survey*.

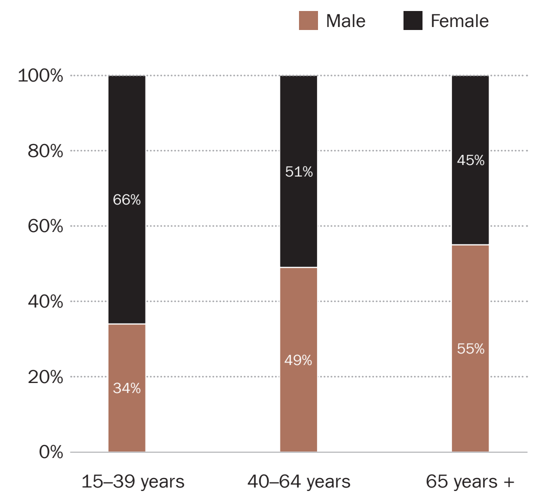
46 In the US in 2016, 35% of the labor force was under 35 years and 56% was under 44 years.

Most working in the sector (75%) were employed full-time (down 8% on 2015), with just 25% in part-time or temporary positions. This is slightly higher than many national averages in 2016, with 18% part-time workers in the wider US labor force, 19% in the EU in 2016, and 18% in France, but in line with others such as the UK with 25%.

Most workers (89%) had permanent employment status, with just 11% on temporary contracts, on par with EU averages in 2016 (at 12%), but more than double the average in the UK of 5%. There was a much higher rate of part-time work for those on temporary contracts, with only 44% of dealers working on contracts working full-time as against 66% part-time. Only 20% of the permanent workers worked part-time.

A consistent finding with previous surveys of the sector over the last ten years is that dealers tend to be very well educated, with a high level of formal, third-level qualifications. In 2016, 83% of those employed in the dealer sector globally held a university or third level qualification, up 6% on 2015. These education levels are much higher than the general labor force in most countries, with the EU average for third-level qualifications in 2016 at 34%, 39% in the US and 43% in the UK[47].

Figure 7b | Gender and Age Profile in the Dealer Sector in 2016



47 The Bureau of Labor Statistics has not published results for what they term "contingent" workers (those outside of permanent contracts) since 2005, with an update due to commence in May 2017. Research conducted by economists at Princeton University in 2016 indicated however that in 2015 an estimated 8.4% of the workforce were independent contractors, and up to 12.6% including on-call workers and temporary help agency workers. See Katz, L. and Kruger, A. (2016) "The Rise and Nature of Alternative Work Arrangements in the United States, 1995–2015." *NBER Working Paper* No. 22667.

7.3 | Auction Sector Employment

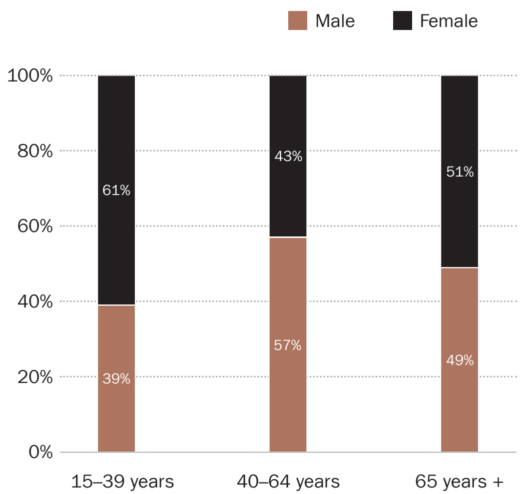
The auction sector employed an estimated 286,960 people worldwide in 2016 in about 14,135 businesses.

The top-tier segment of this sector consists of a small number of national and multi-national global enterprises such as Christie's and Sotheby's, while the second and lower tiers are mid-sized and smaller companies, mainly operating locally and regionally.

In 2016, the largest multi-national top-tier auction houses employed between around 350 and 2,300 people worldwide. While changes in employment were mixed between individual businesses, on aggregate employment in this tier increased by 5% on 2015. In the multi-national auction houses, employment in the US dominated (43% of those employed), with a joint share of 77% including those in UK. China and other parts of Asia accounted for 10% of the total number in 2016.

The average number of those employed in second-tier auction houses in 2016 was 20 people (down from 23 on 2015). The majority (57%) of auction houses in this sector reported stable employment numbers on 2015, 39% reported a rise (by two people on average), and just 3% noted declines (although the average number was higher at five people).

Figure 7c | Gender and Age Profile in the Second Tier Auction Sector in 2016



Like the dealer sector, the gender breakdown in the auctions sector favored women. In the top-tier houses, the share of female workers ranged from 40% to over 65%, but the aggregate share was strongly in favor of female participation at 62%. In the second-tier businesses, women still made up the majority of workers, but the margin was less pronounced, with a share of 54%.

The second-tier auction sector showed an age profile that was relatively similar to the general labor force in many regions, with a slightly higher share in the higher and lower segments. In 2016 in the sector:

- 44% of those employed were aged 15 to 39 years
- 49% were aged 40 to 64 years
- 7% were aged 65 years or over.

The proportion of women was highest in the youngest age group of 15 to 39 years (at 61%), while the majority of those aged between 40 and 64 years were male (at 57%). The smaller sized segment of workers over 65 years was relatively gender balanced (with 51% women).

In the top-tier auction houses, most of those employed in 2016 were engaged in full-time work, with just 17% part-time employment. Most jobs in the second-tier auction sector were also full-time, with part-time workers accounting for just 21% on average in 2016 (and 10% or less in larger markets such as the US and UK). This is on par with the average for part-time workers in the general labor force in many regions as noted above.

Most workers (87%) in the second-tier also had permanent contracts, with just 13% working on temporary contracts. Most of those working in permanent jobs also worked full-time (82%), while for those in the sector working on contract, a smaller share of 53% were full-time.

Like dealers, auction house employees have a high level of educational qualifications, with 57% of those in second-tier houses having third level degrees, lower than the dealer sector but well above regional averages in the general labor force. In the top-tier houses the levels of those with qualifications has averaged over 80% in the last five years.

7.4 | Ancillary Economic Impact

Apart from the direct contribution to the economy from sales and employment in auction houses and galleries, the art market also creates substantial revenue and jobs in a number of ancillary industries and support services used by the art trade and collectors. In 2016, it is estimated that the global art trade spent just under $18 billion on a range of external support services directly linked to their businesses. Despite the decline in sales in the art market, this represented a marginal increase in external spending (by 1% on 2015).

This spending was spread across a number of different industries and services. Figure 7d shows that the largest area of spending, although only incurred by dealers, was on art fairs, which represented 22% of the total (an increase in share of 1% in share year-on-year). Spending on art fairs reached $4.0 billion, an advance of 6% year-on-year. This underlines the huge impact of art fairs to their host economies, but also suggests that the increase in sales at fairs, as outlined in Chapter 2, came with increasing costs for dealers on aggregate.

The second largest area of spending was on advertising and marketing, which totaled $3.6 billion (20% of the total). As in previous years, auction houses accounted for the majority of this spending (70%), and it was their largest area of their external expenditure. Spending on advertising and marketing declined year-on-year by 10%, mainly due to the decrease in spending by the auction sector.

The next highest area of aggregate expenditure, and by far the highest increase year-on-year, was for IT and third-party online costs. Spending totaled $2.3 billion, an increase of 85% from 2015, and representing 13% of total spending. This increase shows the continued importance and investment by companies in the art market in improving their digital infrastructures and presence, which may now be seen as a more direct route to buyers and vendors than more traditional forms of advertising and marketing.

The other area of increased expenditure was packing and shipping, which increased by 25%, due largely to rising spending by dealers. The costs associated with transporting works continues to be a key challenge reported by dealers as their attendance at fairs has increased, and this element of spending accounted for 13% of their total external expenditure in 2016.

Figure 7d | Spending by the Global Art Trade on Selected Ancillary Services in 2016 ($ Billion)

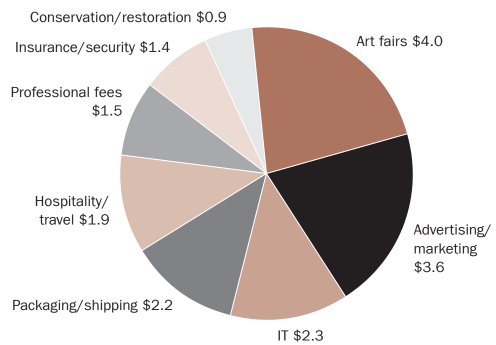


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Table 7a | Ancillary Expenditure and Employment Generated in 2016

Services	Expenditure ($m)	Employment Generated
Advertising / marketing	$3,646.1	67,645
Art fairs	$4,047.2	75,085
Conservation and restoration	$915.6	16,990
Insurance and security	$1,432.8	26,585
Packing and shipping	$2,231.0	41,390
Hospitality and travel	$1,867.2	34,645
Professional fees (auditors, lawyers, bank fees etc.)	$1,548.3	28,725
IT	$2,309.8	42,855
Total	**$17,998.0**	**333,920**

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While hospitality and travel expenditure rose in the dealer sector in 2016, the large decline in the auction sector resulted in a net decrease of 14% year-on-year to $1.9 billion. Professional fees were also down 9% on aggregate, with declines in both sectors.

Table 7a examines ancillary expenditure and estimates the associated employment generation by the global art and antiques trade. In 2016, based on average sales per employee in a range of similar service industries, it is estimated that the revenue directly generated by the art trade in ancillary industries supported 333,920 jobs.

7.5 | Conclusions and Outlook

The art and antiques trade is made up of a number of mainly small, knowledge-intensive businesses, employing a gender-balanced mix of highly educated people in a market that is not only important for generating revenue directly, but also indirectly through a range of ancillary and support services. Many of these support services are highly specialized, niche industries that have developed specifically around the art market and, in many cases, would not exist or survive without it.

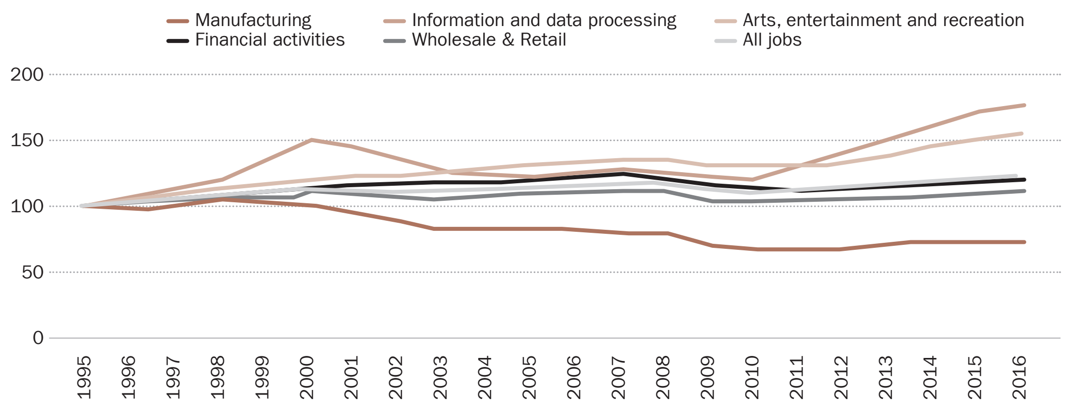
9.8%

Cultural tourism is one of the fastest growing and most valuable sectors of the multibillion dollar global travel and tourism industry, which accounted for an estimated **9.8% of global GDP in 2016** and 14 million jobs.

The businesses and events that make up the art and antiques trade are also critically important parts of the global cultural landscape, and are key in shaping cities around the world as major destinations for the growing numbers of international cultural tourists. Cultural tourism is one of the fastest growing and most valuable sectors of the multibillion dollar global travel and tourism industry, which accounted for an estimated 9.8% of global GDP in 2016 and 14 million jobs[48]. Cultural tourism has been estimated as accounting for close to 40% of the total, and could therefore support about 6 million jobs. The art market and wider arts sector are critical elements in enhancing a nation's cultural value and attractiveness to visitors, and provide an important means to create distinctiveness in an increasingly competitive, crowded and globalized market.

Cultural industries generally are being increasingly recognized as one of the dominant sectors for future economic growth, and have already significantly surpassed older, less knowledge-intense industries such as manufacturing in critical areas like job creation. Recent studies of cultural and creative industries have estimated that these now account for 3% of global GDP and employ 1% of the world's active population.[49]

Figure 7e | Growth in Employment by Industry in the US



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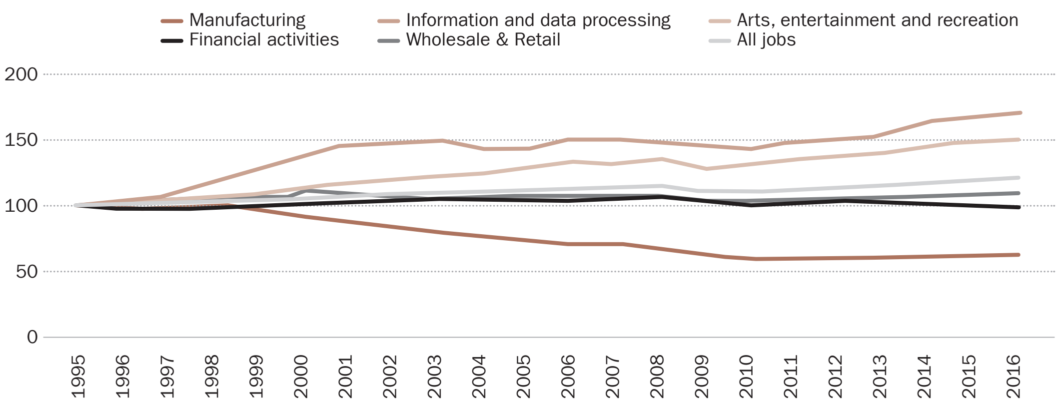
In large economies such as the US and UK, the addition to jobs from the wider creative sphere has far outpaced other sectors. In the US, while jobs in manufacturing have contracted since the mid-1990s, employment in the wider arts and related sectors has expanded rapidly, only outpaced by very few sectors such as information and communications. In the last ten years, jobs in finance and manufacturing have declined, while those in the arts, entertainment and recreation sector have grown at nearly three times the rate of aggregate employment in the economy. Similarly in the UK, manufacturing employment has declined by almost 40% since the mid-1990s, whereas arts and related employment has grown by 50%, more than double the rate of aggregate jobs growth over that period.

48 World Travel and Tourism Council statistics for 2016, from wttc.org.
49 Ernst and Young (2015) *Cultural Times* (published in December 2015).

Figure 7f | **Growth in Employment by Industry in the UK**



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While the art market (and the visual arts sector as a whole) is a small part of the cultural and entertainment industries described above, it has been a consistently important economic contributor, and despite the ups-and-downs in aggregate sales, has punched above its weight in terms of the number and quality of the jobs it has generated, both directly and indirectly.

Alongside the businesses within and connected to the market, events generated by the art market, such as art fairs, have been shown to make a significant contribution to the cities that host them by bringing a rapid inflow of wealthy visitors, spending not only at the fairs themselves but also on hotels, restaurants, local transport and retail and service outlets.

Nurturing a healthy and active market for art can therefore generate a range of positive economic benefits, alongside the less measurable cultural and non-market impact it has within regions.

Although the market has undoubtedly become more global in the last 20 years in terms of both demand and supply, sales and values in the market have regionalized, and the distribution of these economic benefits has therefore been relatively concentrated, with key art market hubs still accounting for the majority of sales. Emerging markets have been very important for the art market and economically they have significantly outperformed mature economies during the last few years. However with the exception of China, the significance of many of these markets in terms of global sales has been in introducing new buyers to the market, with regionally diverse millionaires buying art in traditional centers like London and New York.

There are many reasons why these traditional markets remain dominant. Some are historical and relate these regions having developed cultural infrastructures, experts, institutions and ancillary services to support the art trade over time. Another key factor is that they have traditionally been the strongest bases of wealth, with the US still retaining by far the highest numbers of HNWIs globally, along with a strong upper middle class to offer greater depth to the art market.

However, there are several key changes in the distribution of global wealth that are likely to have a significant impact on the art market over the next decade. In 2016, the Asia-Pacific region exceeded North America in terms of the population of HNWIs, and HNW wealth in this region is growing at a significantly faster rate. Although the US is likely to remain a leading center of wealth going forward, the global distribution of HNWIs is likely to look very different in ten years, and the preferences of buyers in Asia and other regions will undoubtedly influence which sectors and centers of the art market dominate in future.

These regional shifts in wealth will continue to influence the development of the art market in different regions, with growth of HNWIs undoubtedly supporting sales in the key art market hubs, as well as encouraging the development of new and local art scenes. However, apart from its changing international distribution, the distribution of wealth within national populations is an even more critical issue for the art market and its performance going forward. Rising wealth inequality is one of the biggest challenges faced by the global economy, and in advanced economies, levels of inequality are at their highest level in decades. The top 1% of the world's wealth holders have continued to claim a larger share of wealth and incomes, owning more than half of the world's assets in 2016.

The concentration of wealth in the widening segment of global HNWIs has undoubtedly been beneficial for the art market in recent years, in particular boosting sales at the high end of the market, which have been instrumental in driving aggregate figures. Greater wealth in the top percentiles of the population has led to greater spending on art, and has been an important factor supporting strong sales and rising prices in polarized sectors such as Modern and Contemporary art. But it has also created a narrow market (by value) where much of the best performance has been concentrated in the top end, which is also susceptible to certain risks and limitations. This was evident to some extent in 2016 as reduced supply at the top end of these sectors negatively impacted aggregate sales.

The analysis of both the dealer and auction sector also shows that these transactions at the high end make up only a tiny portion of the day-to-day activity of the market, with the sales priced at over $1 million accounting for less than 1% of auction or dealer sales in 2016, while the majority of transactions take place at levels below $50,000. Therefore while the high end is to some extent supported by the growing concentration of wealth (while still subject to the vagaries of supply in this very thin end of the market) and the lowest end (sales less than $5,000) have been boosted by the emergence of young global collectors and the growth in online sales, the middle market remains the most under pressure. The analysis of fine art auction sales in Chapter 3 shows clearly that the segments between $5,000 and $250,000 have not recovered from the contraction in the market in

The segments between $5,000 and $250,000 have not recovered from the contraction in the market in 2009, but have continued to decline versus recoveries or stability elsewhere.

2009, but have continued to decline versus recoveries or stability elsewhere.

A key issue contributing to the performance in the middle segment of the market is that along with the increasing flow of money to the top of the wealth pyramid, there has been the tendency in many regions for the wealth of the middle and upper-middle income groups to be increasingly squeezed, particularly since the global financial crisis. This has undoubtedly put pressure on this middle market for art and antiques, which remains a critical part of the entire market's infrastructure, and where the bulk of businesses in both the dealer and auction market are based, and hence providing the majority of employment, ancillary spending and other economic and fiscal contributions.

Income inequality has been shown to influence the mix of goods people buy and, in particular, the balance between luxuries and necessities. While the general implication is that people tend to spend more on luxuries as incomes rise, the shares of the very top and very bottom percentiles have been shown to be the least variant. A greater share of income in the middle to top few deciles is therefore a potentially more positive and less limiting trend for the art market than the increasing share of the top 1% only. In emerging markets, increasing art sales have been driven by the spending power of the top 1%. However, there are limits to the extent of the development and depth of the art markets in these regions until more middle class and upper-middle class consumers engage and start to purchase art. Equally in developed economies, the engagement of buyers in the middle and lower segments of the art market is critical to sustaining its infrastructure and reducing the further polarization of sales and the risks this entails.

Overall, while there is certainly a case for a certain amount of “good” inequality (with economies such as China showing that rising inequality has gone hand-in-hand with a rapid takeoff in economic growth and an improvement in the living standards of large segments of the population), there is also “bad” inequality, that potentially translates into a range of economic and social issues, and, in the extreme, it can threaten social and political stability, undermine the business environment and hamper long-term growth and economic development. Over the longer-term, countries that have managed to limit excessive inequality have been shown to have stronger and, more importantly, sustainable growth. Similarly in the art market while a degree of inequality is likely to have produced many positive incentives and outcomes, its extent in some areas has also raised concerns. The concentration of

In the increasingly globalized art market, the relatively unencumbered exchange of certain categories of art has encouraged a healthy cross-border trade. Protectionist policies on the other hand have been shown to be as detrimental to national art markets as they are to their economies.

values and spending in a narrow segment of the art market puts the market at risk of becoming polarized and creates prices out of tune with fundamental values and the scope of middle and upper-middle class consumers, who are critical in giving depth to the market and supporting the entire infrastructure on which it is based. The success of a broader range of artists and businesses supported by a wider collector base would be more beneficial for long-term development, through supporting its infrastructure at all levels.

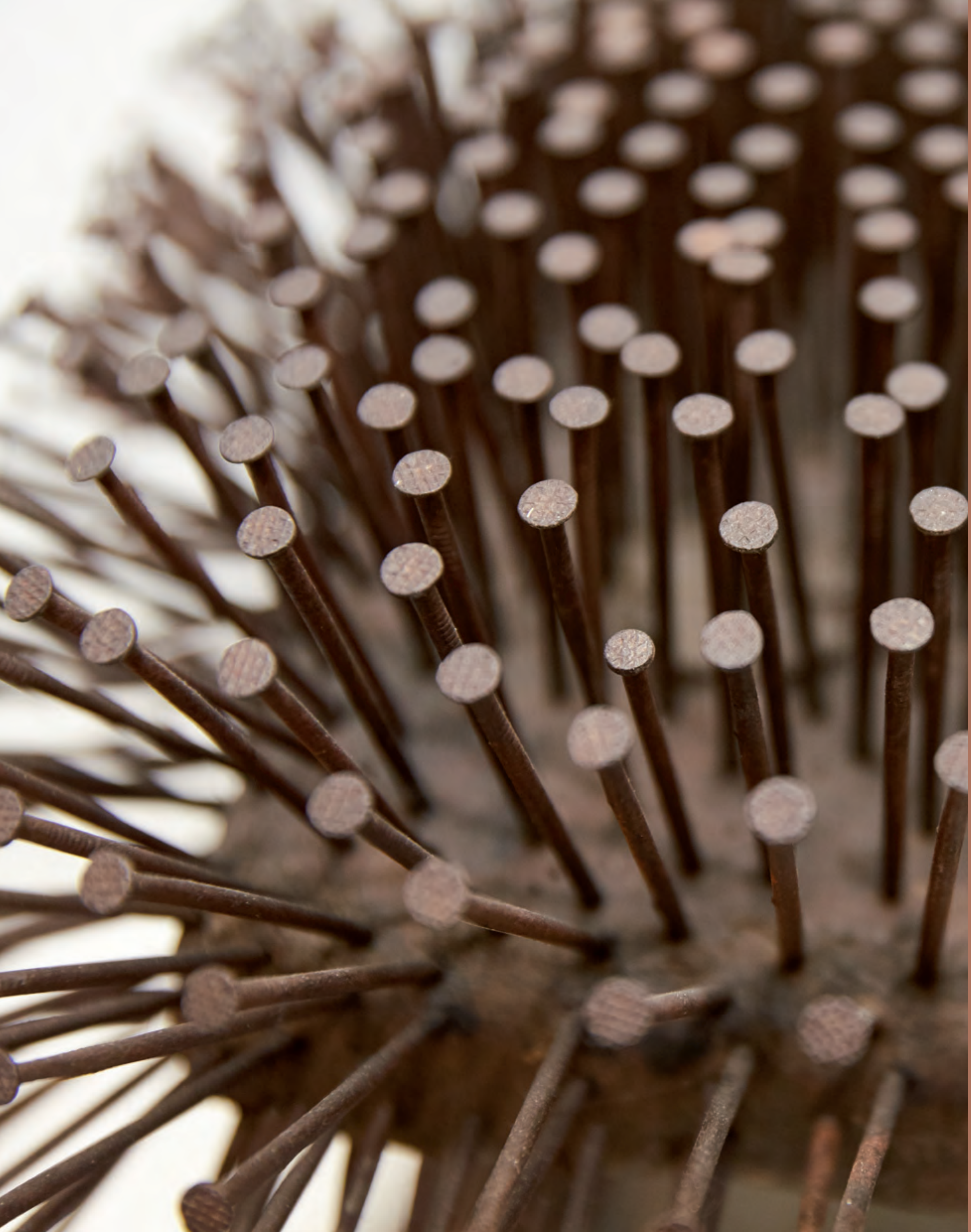
The rising support for populist parties over the last few years is thought to have been driven at least in part by greater inequality in the division of wealth. The outcome of the US presidential election in November and the UK's vote to leave the European Union in June have been cited as expressions of popular anger with ruling elites who have failed to stem the widening global wealth gap. However, while the details of policy agenda in both cases are not yet established, certainly in the US, there are indications that new policies could even exacerbate the divide, with proposed tax policies favoring the wealthiest 1%.[50] While this may positively affect HNW demand in the art market (again at the high end), the impact of tax policies in relation to charitable giving and other key areas could filter down very negatively to the support for the arts in

50 See Batcheleder, L. (2016) "Families Facing Tax Increases Under Trump's Tax Plan." *Urban-Brookings Tax Policy Center Research Report*, October 2016.

countries such as the US, which may affect more diverse segments of the market.

The potential for increasing protectionism in the global economy also looms in 2017, which could also significantly affect the art market in future. In the increasingly globalized art market, the relatively unencumbered exchange of certain categories of art has encouraged a healthy cross-border trade. The rise and dominance of Contemporary art over the last decade has been due, in part, to the fact that there were few restrictions on the flow of international trade in this sector. In other older sectors, heavy regulation and restrictions on trade have constrained some nations to trade only within domestic markets. Another key factor supporting the dominance of the market hubs of the US and UK is that alongside wealth and infrastructure, these markets have been among the most transparent and regulated centers for the trade, where the legal and fiscal systems offer a level of protection to both buyers and sellers, while providing incentives to boost a healthy inflow and outflow of art. Protectionist policies on the other hand have been shown to be as detrimental to national art markets as they are to their economies, with Italy, Brazil and several other countries providing clear examples of how heavy restrictions on international trade have limited domestic growth.

The art market, like most others, is cyclical with sales influenced by external events, and their effects on buyers' and sellers' perceptions and behavior. 2017 is likely to be a challenging year for many global economies, with low and uneven growth and continued economic and geopolitical uncertainty. These underlying factors affect consumer and investor sentiment, which in turn trickles down to the art market. Continued uncertainty or worries over the future stability of other asset markets could, on the one hand, enhance demand as investors and collectors increasingly view art and antiques as a relative safe haven amidst volatility elsewhere. On the other hand, supply could continue to diminish if sellers hold back from selling at what they believe is an inopportune or unpredictable time. The combined effect of these issues may continue to constrain supply in 2017, but could equally increase prices in some areas for those works that do make it onto the market. Regulatory and fiscal changes that may emerge from some of the major shifts in the global political landscape in 2016 will also be likely to affect both art buyers and sellers in future. However, these changes and their effects, if any, are only likely to become evident over a much longer time period.



Appendix

Appendix– A Note on Data Sources

Due to the complex nature of the art and antiques market, information presented in this report comes from a wide range of sources. All of the data is gathered and analyzed directly by Arts Economics from dealers, auction houses, art and antique collectors, art price databases, financial and economic databases, industry experts and others involved in the art trade and its ancillary services.

Some of the key data sources are listed in this Appendix. This is not a full list of those used and does not provide a detailed explanation of the methodological approaches taken. Any queries on data or methodology may be directed to Dr. Clare McAndrew, clare@artseconomics.com.

I. Auction Data

Auction data used in this report comes from 4 main sources:

1. Collectrium

The main supplier of global auction data is Collectrium (www.collectrium.com). Collectrium's database covers 5,600 auction houses, with consistent auction results gathered annually for 1,300 businesses in 53 countries. The database gathers 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 and sales. Any auction houses that do not share their results with Collectrium were either added manually to the analyses in the report, or, in the case of some very small auction houses, were excluded. However, those excluded represent low value sales only that do not significantly affect aggregate trends in the overall market.

Collectrium was founded in 2009 primarily as a collection management platform for fine art and luxury collectibles such as cars, watches, jewelry and wine.

Collectrium integrated its collection management tools with the database of auction results to enable users to benchmark the value of their collections and assess markets in one single experience. The company was acquired by Christie's in 2015 but continues to operate independently, with offices and clients in the Americas, Europe and Asia.

2. 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 subsidiary of the Artron Group and conducts independent research, monitoring and analysis of the Chinese art market. It has the most comprehensive and reliable available database on the Chinese art market. The Artron Chinese Artwork Database has recorded 5.3 million results from over 23,000 sales from over 1,000 auction houses since the first art auction in China in 1993, and adds 600,000 additions to the database annually. The company supplies data-processing services, art appraisal and other price consulting services as well as holding information on around 35,000 artists, over 14,000 art institutions and 4,000 galleries.

As noted in the Chapter 3, the Chinese auction sector uses different categories and sectors than other auctions. The main categories of art used by AMMA are:

a. Chinese painting and calligraphy: This sector is traditional Chinese art, which mainly comprises of Chinese ink paintings on different media such as Xuan paper, silk or fans. It can be divided into: "Chinese calligraphy", where subject matter is calligraphy based on poems and 'words with great wishes'; and "Chinese painting", where the subject matter tends to be landscapes, figurative work, Chinese Xieyi and bird and flower paintings.

b. Oil painting and contemporary art: This encompasses works created by Chinese artists who adopted Western techniques and media (such as oil painting, photography, sculpture, installation, pencil sketch, gouache, or watercolor), after oil painting was first introduced to China in 1579.

c. Ceramics and other wares: Ceramics are decorative art works made from cornish stone, kaolin, quartz stone and mullite. The other wares are mainly works made from or based on bamboo, wood, walnut, teeth and horns. They also include works made with writing brushes, ink sticks, ink slabs, paper, Chinese lacquer and embroidery, as well as Buddha figures, gilding and other small decorative works such as hangings, bracelets.

3. Auction Houses' Published Results

Arts Economics collects data directly from the published auction results and press releases of auction houses around the world.

4. Auction House Survey

Arts Economics distributes two surveys in the auction sector: a top-tier survey of the top 10 auction houses worldwide plus a second-tier survey of around 550 national second-tier auction houses.

II. Dealer Data

To compile data on the dealer sector, Arts Economics conducted an anonymous online survey of approximately 6,500 dealers from the US, Europe, Asia, Africa and South America in 2017. Response rates varied between countries and sectors, but on aggregate came to approximately 17%, which was the highest rate and number of surveys achieved for the global research to date.

Ideally to analyze the market without bias, a random sample of all businesses would be drawn and surveyed. However due to the private nature of the industry and the potential problem of low response rates from random sampling, a stratified sample was used, based on the populations of dealers belonging to art dealers associations around the world, those exhibiting at art fairs, and some lists compiled with the help of experts in particular national markets. While the survey revealed dealers with a wide range of levels of turnover, by the nature of the sampling process, it is skewed towards the middle to higher end of the market and does not account for the very many very small businesses, consultants and other agents in the market which do not belong to associations or exhibit at fairs.

As has been the case for the last three years, in 2016 the survey was conducted in Mainland China both through the online survey and through in person interviews with more than 30 art galleries in Shanghai and Beijing with the assistance of the Shanghai Culture and Research Institute. A series of supplementary interviews were also conducted with dealers around the world.

The survey was supplemented by a series of interviews with dealers in different sectors and countries to gain important in depth insights on the art market, conducted from October to December 2016.

III. Exhibition Data

Artfacts.net

Data on exhibitions was sourced from Artfacts.net. The ArtFacts database is the largest of its kind, containing over 37 million data points covering exhibitions from 192 countries, from the Salon des Refusés of 1863 (the birth of modernity) up to the present. The database contains information from 750,000 exhibitions, and over 30,000 galleries, museums, and art fairs providing an authoritative record of exhibition histories.

ArtFacts monitors over 500,000 contemporary artists providing each with an algorithmically calculated rank, derived from basket of quantified criteria such as gallery representation, collecting institutions, institution type and international reach. The ranking process uses mathematical criteria that accords greater weight to some exhibitions than to others based upon subsets of metadata. This process ensures that while, for example, the number of exhibitions an artist has will always affect their ranking, it will do so only in proportion to the weighted whole of the dataset and its relative context within the ArtFacts ranking schema. In this way, an ArtFacts rank represents both the quality and the influence of an artist. Pronounced changes of rank are therefore strong indicators of activity or atrophy, while sustained movement (up or down) can be an indicator of an artist's long term career path.

IV. Online Data Sources

The research on the online sector was informed in part by a survey of about 50 online businesses selling art and antiques in 2016. This was supplemented by a series of interviews with those working in the online art space, collectors and other experts.

The two main databases used for web analytics were Alexa and Similar Web. There are many sources available and these two are commonly used and have amongst the widest coverage. There are weak spots in all of the web analytics databases due mainly to lack of coverage in certain areas, and small samples which lead to various limitations and inaccuracies. The data should therefore be only treated 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.

V. UBS Survey
Arts Economics partnered with UBS to conduct a survey of 2,205 HNWIs in the US. The survey used the largest online affluent panel in the world, which was provided by Research Now for the survey. The core sample all had household investable assets in excess of $1 million, excluding real estate and business assets. This included 20% who had assets in excess of $5 million. The majority were based in suburban or urban areas (85%) with 15% from rural areas.

The descriptive profile of the panel included the following features:

a. Generation: 67% Baby Boomers, 24% WWII, 8% Gen X, 2% Millennials

b. Gender: 72% male and 28% female

c. Current employment status:
49% employed, 49% retired, 2% student, homemaker or unemployed

d. Of those employed: 45% were business owners, 17% were professionals, 12% senior executives, 11% middle management, and 14% employees.

Respondents were screened to ensure that they were active in the art and collectibles market over the last two years, which included nearly 40% of the sample. These 787 active buyers/collectors were then asked a series of questions on their preferences and activities in the market.

VI. Secondary Sources
The report uses a large number of secondary sources (that are cited in the report). Some key sources used for data in the report included:

– The IMF World Economic Outlook (Database)

– Merrill Lynch and Capgemini World Wealth Reports (Various years)

– Credit Suisse Global Wealth Databooks (various years)

– *ARTNews* Top 200 Collectors (various years)

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