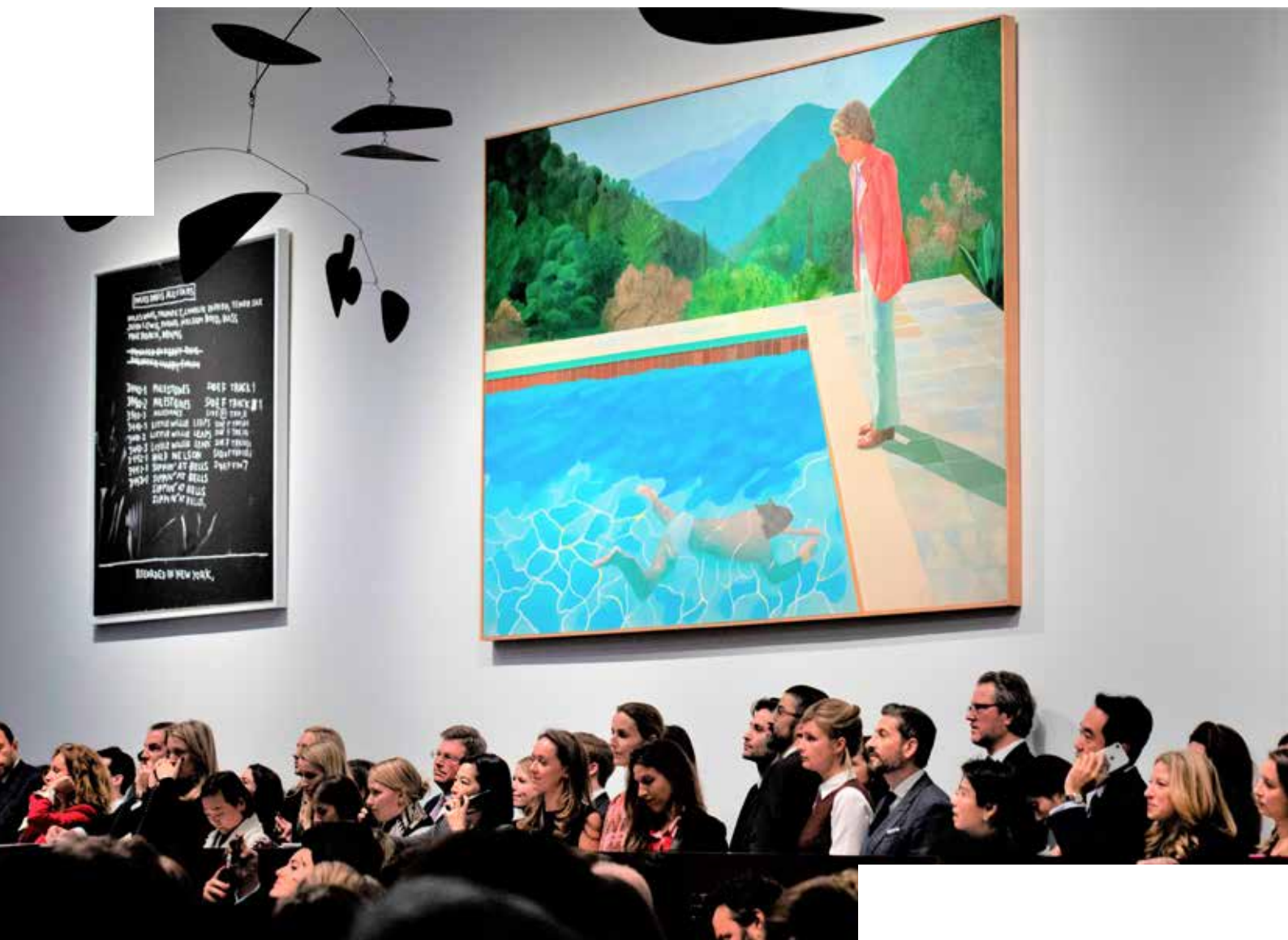


Research Institute

Collectibles: An integral part of wealth



Editorial

Wealth holdings of most individuals around the world have always been spread over different kinds of assets – mostly financial assets in modern times, but also real assets.

While real estate by far leads real assets in size and prevalence among private individuals, items of intrinsic or social value such as collectibles, which can ultimately be monetized, often play an important role as a store of value.

Our recently published Credit Suisse Global Wealth Report 2020 has demonstrated once again the relative stability of non-financial assets compared to financial assets in times of great volatility. Given the uncertainty created by the COVID-19 pandemic and some concern about the sustainability of economic policies precipitated by the crisis, collectibles can add an extra dimension to investors' portfolios by helping to diversify asset allocation and provide an element of safety.

Not only do they serve as an alternative investment, but collectibles are tangible assets that offer satisfaction and pleasure to their owners, enabling them to pursue personal interests and passions. Nevertheless, they are not free from risk and, like every investment, require adequate research, expert advice and management.

For this reason, we are proud to present our inaugural study in collaboration with Deloitte Luxembourg. Given the intricacies and scope of the collectibles market, the aim of this initial report

is to provide an overview and a first look at some popular collectible assets that have fueled the imaginations of investors over the years.

Although the COVID-19 pandemic has transformed the market for many collectibles as it has many other markets, we find that the high-end market for collectibles has remained dynamic and able to adapt, embracing online platforms and continuing to attract new collectors. It appears that the aesthetic experience and challenge of finding, buying and selling rare and desirable items with historical and cultural value created by renowned artists, craftsmen and designers has kept the collectibles markets vibrant.

This report would not have been possible without the generosity, commitment and insight of our distinguished contributors. We would like to express our thanks to Georgina Adam, Adolfo Orsi, Philipp Schwander and Florian Leonhard.

I wish you an enjoyable and informative read.

Urs Rohner

Chairman of the Board of Directors
Credit Suisse Group AG



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Cover photo: David Hockney's Famed Pool Scene displayed at Christie's Post-War and Contemporary Art Evening Sale in New York, 15 November 2018, by DON EMMERT/AFP via Getty Images

Photo left: 1920s Lasalle Antique Hood Ornament Of Female Form Flying Goddess Vintage Classic Car Radiator Grille Metallic Silver by D Logan/Classicstock/Getty Images

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Muzeum Susch, Engadin Valley, Switzerland

Interview: Between passion and investment

Interview with Grażyna Kulczyk, Michael Strobaek and Adriano Picinati di Torcello

How do collectibles and financial assets co-exist and complement each other in private wealth, what makes great collections, and how can specialists avoid the pitfalls and tackle the key challenges of collecting? In this introductory interview, Nannette Hechler-Fayd'herbe, Head of Economics & Research and CIO International Wealth Management at Credit Suisse asks three of the experts – Grażyna Kulczyk, Polish art collector and entrepreneur; Michael Strobaek, Global Chief Investment Officer of Credit Suisse; and Adriano Picinati di Torcello, Global Art & Finance Coordinator for Deloitte – to answer these questions and more.

Michael Strobaek, as Global CIO of Credit Suisse, you meet and advise many clients on investing. To what extent are collectibles part of Credit Suisse's clients' wealth?

MS: In fact we have conducted a survey of our representative ultra high net worth individuals across the various regions we serve and found that more than 70% of our clients are collectors, and a third of these are new collectors. Also most clients I meet have “a passion” that they somehow make part of their investment portfolios, such as watches, jewelry, classic cars, paintings and sculptures, rare wines, and believe it or not even five-star hotels and football clubs.

“

Most clients I meet have “a passion” that they somehow make part of their investment portfolios

Grażyna Kulczyk, as a specialist in Central and Eastern European art, collector and entrepreneur, what would you say is the typical profile of a collector? What made you start collecting art?

GK: In my view, a truly conscious collector is a person with inherent sensitivity and imagination, ready to devote a substantial amount of time and resources to developing a deep knowledge about the collectibles she or he is interested in and who acts according to her/his own principles, regardless of standards, fashions or trends, or specific investment purposes. Although I took my first collecting steps as early as during my student years, when I built an interesting poster collection, and then spent many years from the early nineties onward to develop a selection of artworks, it is only since 2007 that I consider myself a truly conscious collector. That year, the exhibition of my art collection in my hometown Poznań marked a turning point in my rapport to art. My motivations changed. Whereas, before, my art purchases were essentially motivated by decorative purposes, I have since focused more specifically on women and conceptual art. As a businesswoman in Poland, I had experienced so many times how difficult it was for women to establish themselves professionally and my act of collecting became more of a statement thereafter.



Grażyna Kulczyk is a Polish art collector, entrepreneur and philanthropist. She is a champion of contemporary art and avant-garde choreography, and supports the development of many new technologies and start-ups. She is particularly engaged in supporting entrepreneurship among women. She is a board member of the Modern Women's Fund Committee of the Museum of Modern Art in New York and has been recognized as one of the Top 200 Collectors in the world by ARTnews magazine.

Portrait of Grażyna Kulczyk © Anoush Abrar
Courtesy Muzeum Susch & Art Stations Foundation CH

I wanted to give a platform to women artists who were probably experiencing the same difficulties in establishing themselves in the art world. I wanted to discover underrated talents among them and let the world see them.

Michael, are collectibles on the rise and why?

MS: Of all the clients we asked, about 80% indicated they intended to collect the same or more in the future. Many clients I meet regard collectibles as a great and stable store of value/wealth for future generations. Presently, nearly half of our clients say they hold 2%–5% of their wealth in collectibles and 15% even have collectibles worth 5%–10% of their total wealth. The key motivation of clients to collect is either pure passion and emotion, or emotion with a financial motivation/gain in view. Hardly any of them regard their collectibles as pure investments – there is more to it than that. Some also want to create a positive impact, but more often regard collectibles as a diversification, a store of value, and something they feel proud about. Collectibles symbolize their passion and interests.

Adriano Picinati, is this comparable to the broader market?

AP: From all the surveys we conducted for our Deloitte Art & Finance report over the last ten years, we find that fine art and collectibles indeed represent a sizable and growing portion of the worth of wealthy individuals. It is a global phenomenon, but with different stages of maturity across geographical regions. Whatever the motivation to collect, there is a need to develop a similar approach to other more classic assets (such as financial and real estate assets) to protect, monetize and transfer those passion assets that are very often a part of our heritage.

Michael, what collectibles do Credit Suisse clients predominantly focus on?

MS: We find fine art and watches to be by far the most frequent collectibles of our clients, followed by antiques, jewelry, fine wines and classic cars. Womens' luxury handbags are also cited more often than stamps, coins or rare whiskey in our survey. But, as I mentioned before, some very wealthy clients also collect "items" like fashionable hotels and football clubs.



Michael Strobaek has been the Global Chief Investment Officer and Chairman of the Credit Suisse Investment Committee since 2013. Michael has more than 20 years of financial markets experience, overseeing international investment management operations. Prior to joining Credit Suisse, he worked for a Swiss family office and UBS. He holds an M.Sc degree in Economics and Business Administration from Copenhagen Business School and a CEMS Master's degree in Finance from the University of Cologne, Germany. He is a CFA Charterholder and holds a CEFA / AZEK diploma.



Heidi Bucher, Herrenzimmer, 1977–79, Muzeum Susch © Studio Stefano Graziani; courtesy the artists Muzeum Susch & Art Stations Foundation CH

Grażyna, what makes a great collection? What was helpful to you in that process and how much do you rely on research?

GK: I think of a great collection when each piece of work adds to the richness of the whole. What is helpful in that process is certainly ongoing research to expand one's knowledge base. Openness to specialist advice is also helpful, but, importantly, a collection is the reflection of personal convictions and views. For example, as I focused on showing women's art, I spent time researching women artists whose careers were overshadowed by their male partners during their lifetimes. This is how I discovered Heidi Bucher and her exceptional work. Much of her lifetime was spent in the shadow of her husband, Carl. Her work series "Skinnings" is not only very unique in the material and technique utilized, but also the whole context and artistic process. She specifically spent hours taking latex negatives of the cigar room, or "Herrenzimmer," in her childhood house, where ladies in the past were not welcome.

Your private museum in Switzerland has created a novel environment for art and mediation. How many of your activities are philanthropically motivated and what can private museums do that public institutions can't?

GK: Philanthropy plays a big role in my collector activities. Of course I take personal pleasure in the works I acquire for myself, but sharing and the act of giving is at least as important. It was always my dream to create a museum and present great artistic talent and expression to a larger public. Importantly, "Muzeum Susch" is not showing my collection at all. There are only very few pieces I donated. But it is an enormous satisfaction for me to see how the museum has changed the Engadin valley, how it has engaged local people and craftsmen, how it draws visitors from Switzerland and abroad, and how it serves to make underrated artists better known. I am a provocateur at heart and find immense satisfaction in changing the course of things and the reality in which I live. Private

museums enjoy more freedom than public institutions. More freedom in programming, but also with respect to how art is presented. At Muzeum Susch, for example, pieces of artwork are not labeled. Visitors receive a brochure in which they are invited to download a mobile app or search for the works and the artists at their leisure. The objective is to let visitors focus on the work without any other prior influence than the emotion it triggers in them.



“ A collection is the reflection of personal convictions and views

How has the COVID-19 crisis affected the museum's activities?

GK: We have been fortunate to continue attracting many visitors. This summer, we have seen around 800 visitors each week, which is more than the year before. We are hopeful that our exceptional location, history and approach will continue to inspire visitors as we develop our exhibitions and activities further.

Adriano, Deloitte Luxembourg has been developing its Art and Finance department since 2008. What have been some of the key motivations?

AP: It all started with a great interest and passion for the field. But we also noticed a unique combination of macro trends creating an interesting dynamic that drove a revolution in the art and finance ecosystem where three sectors intersected: finance, art businesses and culture. We started with a blank page and a vision, and we see a growing interest in the sector every year. Today we collaborate with Deloitte offices in 26 locations spanning five continents.

Michael, what are clients' key concerns associated with collectibles?

MS: Our clients are most concerned with the correct valuation and appraisal of collectibles and the due diligence involved, followed by their knowledge of collectibles. The lack of regulation,

Adriano Picinati di Torcello is the Global Art & Finance Coordinator for the Deloitte network. He is also in charge of Art & Finance at Deloitte Luxembourg, an initiative he has been coordinating since its beginning. Deeply involved in creating awareness of art and finance, Adriano has initiated the international Deloitte Art & Finance Conference, which has become the annual benchmark event in the field. He is the co-author of the Deloitte and ArtTactic Art & Finance report. Being the spokesman of the Art & Finance initiative within Deloitte, he regularly speaks at international conferences.

transfers to the next generation, estate planning and being able to borrow against their collections are also cited, but less frequently. Finally, safety and security are of course important, especially when it comes to transportation and physical storage.

Adriano, what do you see as the biggest challenges facing the global art and finance industry?

AP: The findings of the 2019 Deloitte and ArtTactic Art & Finance report show that collectors expect more from their trusted advisors. Art market regulation and a lack of transparency combined with the difficulties in finding the right expertise are perceived as the biggest challenges facing wealth managers when developing art-related services. The list includes estate planning and generational wealth transfer, art valuation and avenues for art philanthropy.

“

I believe the overall challenge is to reinvent the client experience

The notion of being a “caretaker” rather than an owner is likely to be one of the motivations underpinning art philanthropy models in the next decade. We are seeing a paradigm shift in the way collectors share their collections for the public benefit, and we are likely to see this trend continue with the next generation of art buyers. Social impact investment to help fund arts and culture is also receiving more attention. The demand for education means that offering greater educational activities and services would be a relevant way for wealth managers to engage with new and existing clients. So I believe the overall challenge is to reinvent the client experience focused on the personal and emotional connection derived from passion-related wealth. Holistic wealth management is a key driver behind art-related services.



Nannette Hechler-Fayd'herbe is Chief Investment Officer of International Wealth Management (IWM) and Global Head Economics & Research of Credit Suisse. She has been with Credit Suisse since 1999, originally joining the group as the Head of Swiss Fixed Income and Credit Research at CSFB. She is a long-standing member of the Global Investment Committee and previously was a board member of the Credit Suisse Pension Fund Switzerland for several years and a board member of the International Capital Markets Association.



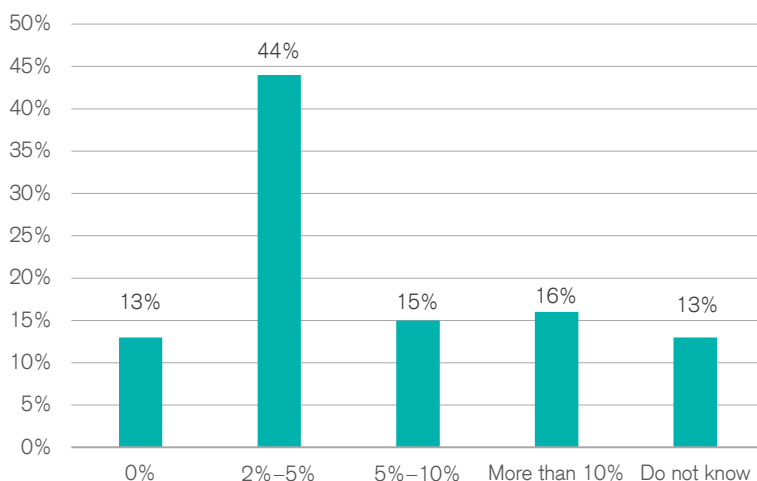
Sotheby's Rembrandt to Richter Live Auction 28 July 2020; courtesy of Sotheby's

Collectibles facts and figures

Nannette Hechler-Fayd'herbe, Adriano Picinati di Torcello

The motives behind allocating a share of wealth to collectibles are as diverse as the collectors themselves – whether it be pure passion, social recognition, philanthropy, a desire to create a legacy for the broader public, or collecting for investment purposes and a store of value. Prior to the COVID-19 crisis, the total value of collectibles in private collectors' hands was estimated at around USD 1 trillion, with the biggest share of annual sales claimed by fine art, followed by watches and jewelry, wines and classic cars.

Figure 1: Credit Suisse UHNWI survey on collectibles' percentage of total wealth



Source: Credit Suisse

Collectors and collectibles

It does not necessarily require great wealth to start an interesting collection. But collectibles and wealth have been closely intertwined since antiquity through centuries of collectors and prominent patrons. Today, 26% of the top 200 art collectors as listed by ARTnews are also on the Forbes billionaire list. According to The Attitudes Survey by Knight Frank,¹ the share of UHNWIs (ultra-high-net-worth individuals) devoting wealth to luxury investments fluctuates between 3% and 6%, with a regional average of 5%. A survey of 55 UHNWIs across various regions conducted by Credit Suisse wealth management services has found that 44% allocate 2%–5% of their wealth to collectibles, 31% allocate more than 5%, while only 13% have no exposure at all to collectibles (13% of respondents said they did not know).

1. The Attitudes Survey 2020 (Knight Frank, The Wealth Report 2020) is based on responses from 620 private bankers and wealth advisors managing more than USD 3.3 trillion of wealth for UHNWI clients. The survey ran during October and November 2019.

Definitions of UHNWIs differ from one source to the next. The Credit Suisse Global Wealth Report defines UHNWIs as individuals with total wealth of more than USD 50 million. However, from a collectibles standpoint, individuals or families with wealth above USD 30 million are a more relevant segment to consider. Based on the Credit Suisse Global Wealth Report 2019, we estimate that people with net worth exceeding USD 30 million accounted for USD 26.3 trillion of global wealth prior to the outbreak of the COVID-19 pandemic. By mid-2020, this number is estimated to have increased to USD 27 trillion according to data of the Global Wealth Report 2020.

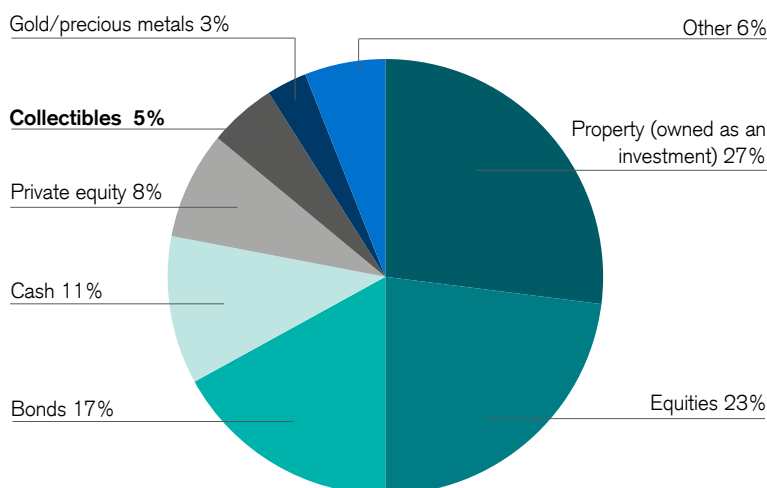
Conservatively estimated, an approximate share of 3%–6% in collectibles would bring the value of collectibles owned by private individuals to around USD 1.2 trillion. Regionally, the USA is not only the main bedrock of private household wealth globally, but also the key market for many collectibles. But Asia, and China in particular, has made important gains over the years in terms of added wealth and will most likely continue to benefit from the global distribution of wealth in 2020, despite the COVID-19 crisis. In the collectibles domain, Asian collectors have also been an important driving force, with an increasing market share of collectible sales across the board.

“ Supply for auctions has been less than demand during the COVID-19 crisis

Collectibles sales deeply disrupted by COVID-19

Like so many other sectors, the collectibles market has been deeply disrupted by the COVID-19 outbreak. For example, major events like the Pebble Beach Concours d’Elegance for classic cars or the Art Basel Hong Kong for fine art, as well as high profile marquee auctions like Sotheby’s Asia Week Series in New York have been cancelled or postponed. Although the collectibles market has tried to adjust with the help of online sales, global collectible sales have plummeted year on year in 2020. For instance, artnet reports that USD 2.9 billion worth of fine

Figure 2: Average UHNWI asset allocation



Source: Knight Frank, The Attitudes Survey (2020)

art was sold at auction in the first half of 2020, down 58.3% from the year before. Classic car auction sales, for their part, are estimated to be down by about 40% (see chapter on classic cars).

As has been observed in other recessionary periods, high-end collectibles have seen sales dry up most, while lower-end collectibles have shown more resilience. The Fall 2020 artnet Intelligence Report, for example, reports that sales of works priced up to USD 10,000 were down only 28% in the first half of 2020 versus the year before, while works in the top end of the market were down 60%–65%. Consistent with this development, the average price of a work of art sold at auction stood at USD 25,926 by mid-2020, down 41.3% from the year before. Pi-eX, an analyst database reports even larger drops (see chapter on fine art). However, sell-through rates² remained in the 64%–68% range observed since 2013, with 65.5% for the first half of 2020 according to artnet. This indicates that supply for auctions has been less than demand during the COVID-19 crisis, with fewer pieces being offered for auction as sellers wait for better economic conditions to fetch higher prices. This is similarly the case in the classic cars market, with sell-through rates of around 69% during the COVID-19 crisis compared to 74% pre-COVID.

2. Sell-through rates are the percentage of pieces put up for auction by the auction house and which found buyers.

Online auctions step in

Similar to many other sectors, COVID-19 has acted as a catalyst in increasing the digitalization of collectibles trading. E-auctions have boomed in 2020. For example, Sotheby's online sales from January to May 2020 surpassed the USD 100 million mark for the first time, with their online contemporary art sale from 4 May to 14 May fetching a record USD 13.7 million – twice as much as their previous online sales record of USD 6.4 million. Artnet reported that online art sales at the three leading auction houses, Phillips, Sotheby's and Christie's, rose 474.8% in the first half of 2020 compared to the same period in 2019.

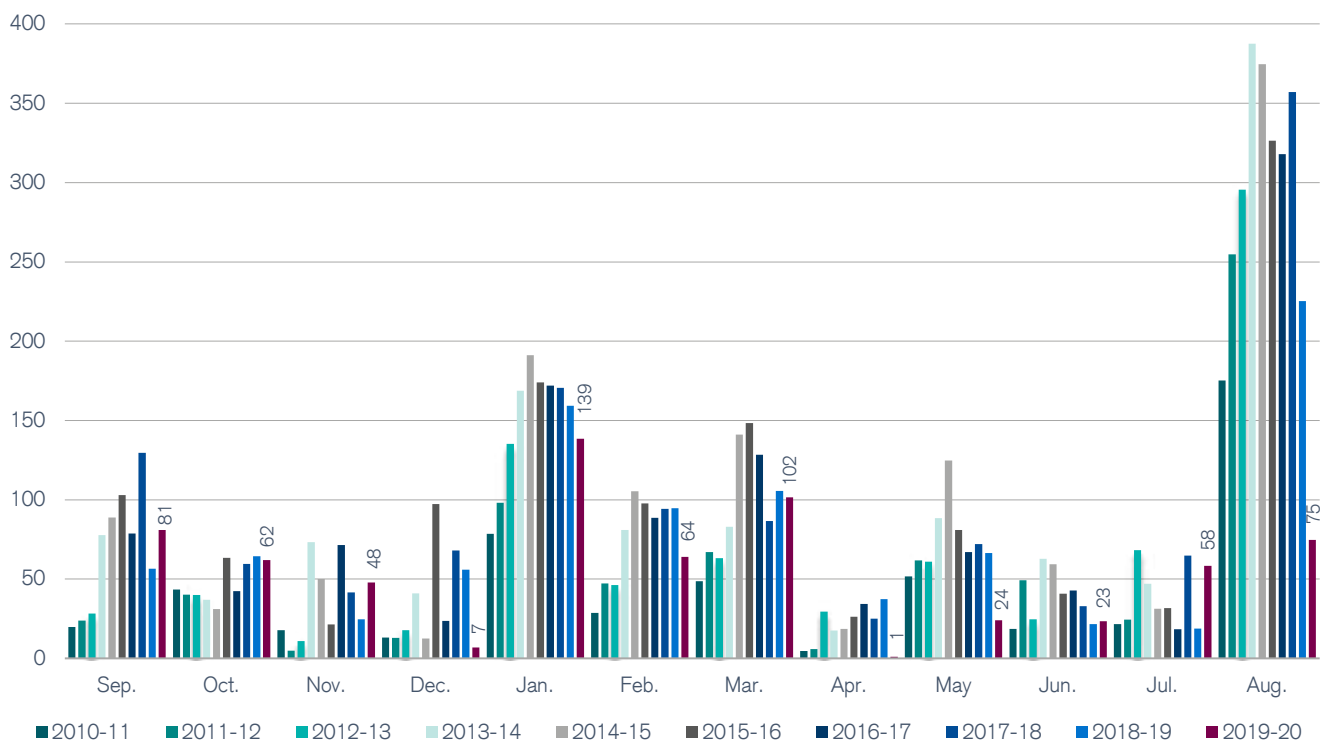
Interestingly, the auction houses have reported that about 40% of their online buyers are new customers. So, importantly, the enhanced online auctioning activity has helped to expand the customer base for auction houses.



Enhanced online auctioning activity has helped to expand the customer base for auction houses

E-auctions lend themselves particularly well to watches, jewelry and wine. For example, Sotheby's has been holding weekly watch auctions and been focusing on its luxury goods offerings. Fine art sales have also seen online-auctioning increase the participation of decorative buyers. And in vintage cars, e-trading platforms like Bring a Trailer (BaT) or Hemmings online auctions have registered a steady increase in online car sales over the past few years. However, while the digital migration has not seemed to weaken sell-through rates, online auctions are tending to concentrate on collectibles with lower median prices.

Figure 3: Monthly classic car auction turnover, 2010–20, in USD million



Source: Classic Car Auction Yearbook 2019–2020 by Adolfo Orsi, Historica Selecta

Negative impact on art collector sentiment in 2020

Collectibles are often regarded as a real asset and are often compared with other real assets like gold, for example. However, collectibles and gold do not necessarily perform alike during economic downturns. While gold acts as a safe haven, collectibles can be quite sensitive to economic cycles. ArtTactic produces an Art Market Confidence Indicator using a similar methodology to, for example, the US Conference Board CEO Confidence Survey.

A group of art insiders made up of around 125 collectors, auction houses, advisors and other art professionals are surveyed regarding their expectations with respect to the direction of the art market in the next six months. In May 2020, the index dropped to a level of 11, down from 37 in January 2020 and 67 in April 2019. Such low levels of confidence were last observed in 2009. By contrast, gold rose by nearly 40% from USD 1,238 per ounce in April 2019 to USD 1,730 in May 2020, exceeding the USD 2,000 mark by August 2020 before dropping to USD 1,880 again in September 2020.

Sentiment in the art market tends to fluctuate in line with global economic activity as can be observed from the correlation between the index and a business cycle leading indicator such as the Purchasing Managers Index (PMI). Overall, while current market conditions for many collectibles may be perceived as unfavorable and prevent sellers from supplying high-end collectibles in particular, a rebound can be expected once economic conditions improve again.

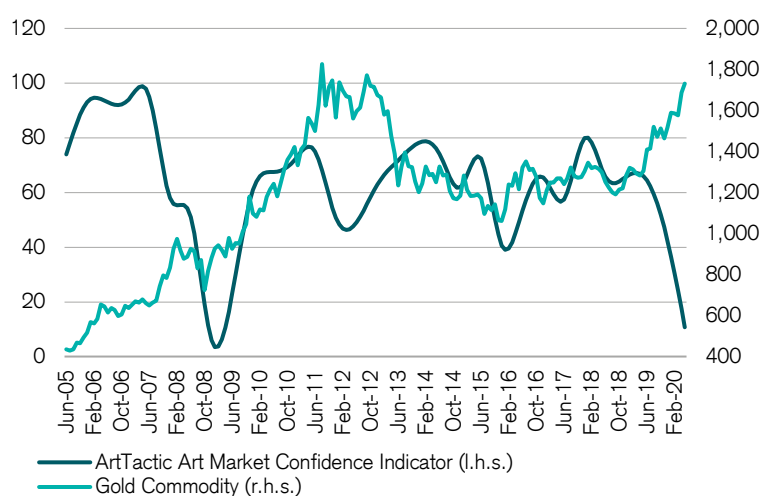
Collectibles in the long term

Collectibles and collections have multiple dimensions of value for their owners and the market – emotional, aesthetic, cultural, historical, social, and importantly also financial. For some collectors, they are investments like other real assets and are an integral part of their wealth and assets. As such, it is essential to understand their attributes as building blocks for financial planning by comparing and contrasting them with other assets. The classical way to do this is to compare typical historical annual returns, volatilities and correlations with other assets, as well as performance under different global conditions and throughout the business cycle.

Navigating collectibles indices

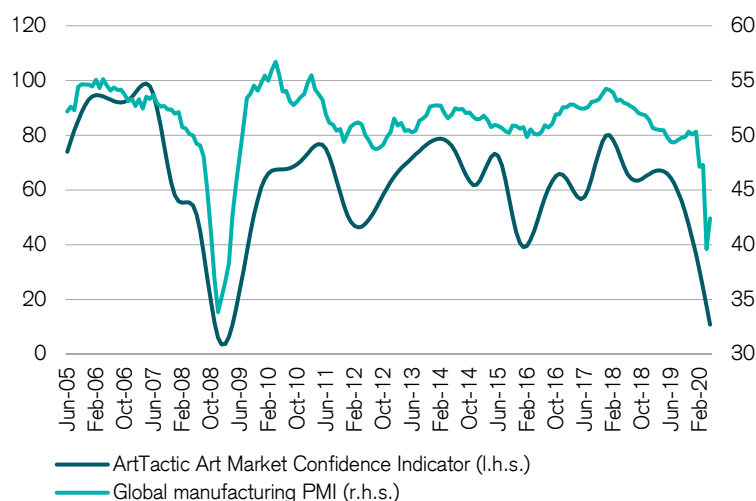
To that effect, collectibles indices play a useful role as they can help to illustrate some aspects of collectibles as tangible assets. Compared to liquid financial asset indices, however, collectibles indices face considerable challenges as to how relevant they are as a reflection of financial performance and risk. Besides being mostly non-investable, collectibles indices are made up of assets that, in contrast to financial assets, are non-fungible, unique/heterogeneous, item-by-item, and not particularly liquid as transactions only occur from time to time. Additionally, while public auction data are available, private sales data are not, which

Figure 4: ArtTactic Market Confidence Index versus gold



Source: ArtTactic, Credit Suisse

Figure 5: ArtTactic Fine Art Confidence index versus Global manufacturing PMI



Source: ArtTactic, Credit Suisse

means that a significant number of transactions are unavailable for observation and inclusion. In turn, transactions included in public auctions are typically subject to significant selection bias.

Hence the construction of these indices nearly always means compromising on at least one of the above-mentioned aspects, such that the indices can only be taken as rough indications of performance, volatility and correlations. Therefore, when looking at summary statistics based on such indices, investors need to take into account the index methodology, the universe covered, the number of price points included, bias aspects (e.g. whether an index is based on dealer surveys as opposed to realized transactions and prices) and so on. Also, especially when comparing collectibles statistics to conventional financial asset statistics, investors should know whether the indices include cost aspects (e.g. sellers/buyers fees, maintenance, insurance, etc.) and therefore whether they represent total returns or are strictly price indices. For an overview of some of the most frequently used collectibles indices and important aspects in their construction, see “Appendix: Collectibles facts and figures” on page 62.

In **Figure 6**, for illustrative purposes, we compare the historical evolution of the Sotheby’s Mei Moses index for fine arts with the Liv-ex Fine Wine 100 Index, the HAGI Top 100 Index for classic cars, the AMR indices for watches and

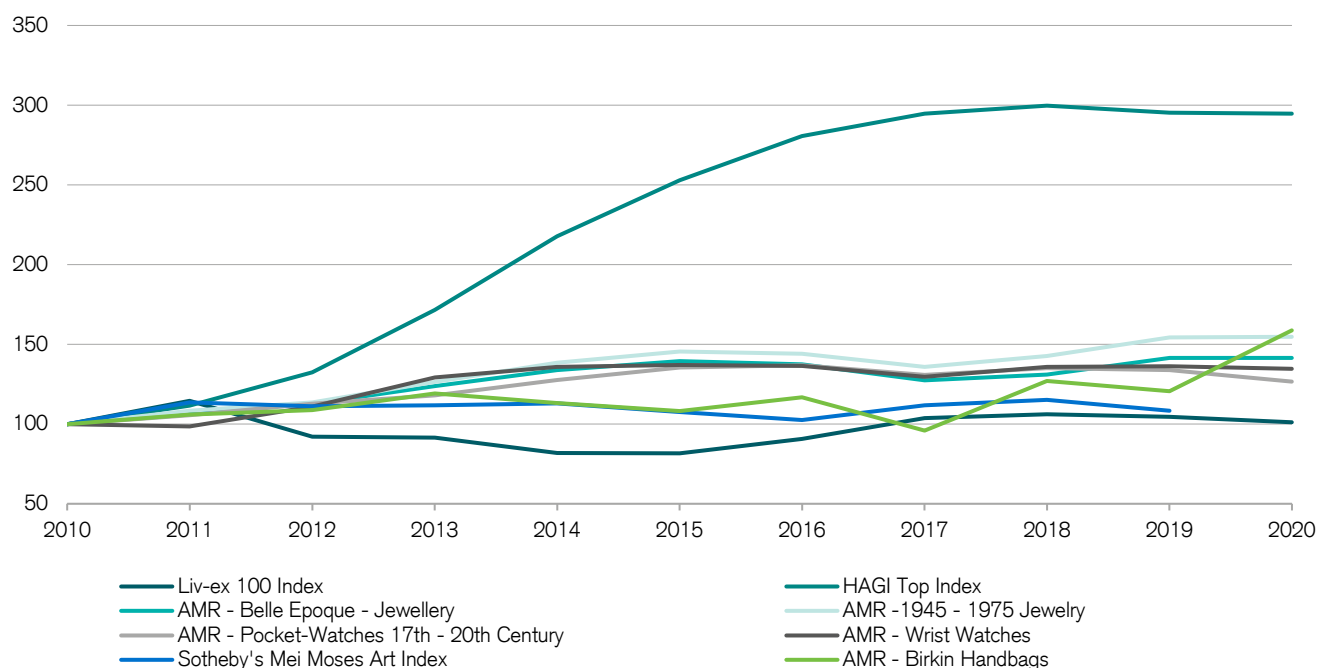
jewelry, and a luxury handbag index, all rebased to 100 in 2010. Over the last ten years, most collectible categories have gained in value, but with substantial differences from one to the other. On aggregate, wines and fine art have returned the least. Watches and jewelry have been effective stores of value, with cumulative 10-year returns between 27% and 61%. Classic cars were by far the best-performing collectibles category (see **Figure 6**). Naturally, this trend is time- and index-dependent, and other periods will show different developments. Nevertheless, it does give an indication of how the last decade panned out for various categories of collectibles.

Collectibles returns and volatilities

With all the caveats implied in the construction of the respective indices, **Table 1** gives us a sense of the price returns of different collectibles categories, their volatility and how they compare with financial assets. Collectibles can be grouped in three broad categories by their returns and volatilities. By far the most stable (low-volatility) categories are jewelry, watches and luxury handbags, with annualized volatilities of 2%–7% and mid-single-digit returns. Based on returns only, they compare to global bonds; However, considering their very low volatility, they offer investors the most compelling risk/reward proposition of all the collectibles.

Figure 6: Illustrative price development of selected collectibles categories from 2010 to 2020

Rebased to 100 on December 2010



Source: Credit Suisse, Liv-ex, AMR, Sotheby's, HAGI

Their correlation with other asset classes is low or negative, meaning that they also act as good diversifiers to traditional financial assets and can be considered a better store of value.³

At the other end of the range, fine art is clearly the more volatile and cyclical collectible category similar to high-beta equities (they actually compare to emerging market equities both in returns and volatilities) and display a relatively high correlation to other cyclical assets.³ Wine is in the middle of the range with medium volatility (about 13% on an annualized basis) and mid-single-digit returns, while classic cars seem to have offered an attractive risk-reward over the last ten years, with equity-type returns, but medium volatility similar to that of wine.

3. Correlations overview available on request

Conclusion

Collectibles are assets in their own right and, as such, demand the same attention and management that other assets receive as they involve risks of their own and are sensitive to the business cycle, interest rates and other specific factors. Given their store-of-value or more cyclical attributes, they can help investors protect and grow their wealth. In times of economic crisis, such we are experiencing with the COVID-19 pandemic, liquidity in the collectibles market drops sharply. For this reason, owners of prize collectibles tend to withhold offering them for sale so as not to incur price drops. In general, however, as we expect global wealth to increase again once the economy recovers post-COVID, this should continue to support increases in the value of collectibles.

Table 1: Historical returns and volatilities

| | Annualized returns | Annualized volatility (std. dev.) | Returns to volatility ratio |
|---|--------------------|-----------------------------------|-----------------------------|
| Wine index (Liv-ex100, 2001–20) | 5.7% | 12.9% | 43.9% |
| HAGI (R) Top Index (2010–20) | 12.0% | 10.1% | 119.1% |
| Sotheby's Mei Moses All Art Index (1950–2019) | 8.4% | 16.9% | 49.7% |
| Contemporary art | 9.4% | 35.3% | 26.5% |
| Impressionist and modern art | 8.9% | 33.8% | 26.2% |
| Old master and 19th century art | 7.4% | 19.1% | 38.8% |
| British paintings | 9.1% | 50.1% | 18.2% |
| American art | 6.7% | 37.0% | 18.2% |
| Latin American art | 12.2% | 39.1% | 31.2% |
| Traditional Chinese works of art | 6.5% | 22.0% | 29.6% |
| Art Market Research Jewelry and Watches Index (jewelry indices: 1985–2020, wristwatches: 1983–2020, pocket watches: 1976–2020) | | | |
| Jewelry: Post-war up to 1975 | 4.8% | 2.4% | 196.7% |
| Jewelry: Art deco and pearls | 5.0% | 2.4% | 211.8% |
| Watches: Wrist | 5.5% | 3.4% | 160.0% |
| Watches: Pocket | 1.5% | 2.9% | 51.1% |
| Art Market Research Luxury Handbag Index (2010–20) | | | |
| Luxury handbags: Chanel | 6.0% | 3.5% | 170.0% |
| Luxury handbags: Hermès Birkin | 5.7% | 6.9% | 82.1% |
| Selected traditional asset classes | | | |
| Global equities (MSCI AC World, 1976–2020) | 7.7% | 15.1% | 51% |
| Global bonds (1990–2020) | 5.6% | 5.3% | 107% |
| US Govt. long-term bonds (1976–2020) | 8.8% | 10.8% | 82% |
| US corporate bonds (1976–2020) | 7.9% | 6.8% | 116% |
| Developed market real estate (1994–2020) | 6.3% | 19.2% | 33% |
| Commodities (1976–2020) | 4.8% | 14.9% | 32% |
| Gold (1976–2020) | 6.1% | 18.6% | 33% |
| Hedge funds (1993–2020) | 7.0% | 6.8% | 104% |

Note: all indices except Sotheby's Mei Moses indices (annual) are in monthly frequency.

Source: Credit Suisse





"Quatre Nus" by Sanyu at 2020 Sotheby Hong Kong Spring Auctions, 6 July 2020; photo China News Service

Fine art: Mirror of human history

Georgina Adam

Fine art is one of the most prevalent and vibrant collectible categories worldwide. Like with many other sectors, the 2020 COVID-19 pandemic has induced profound changes, likely to remain even after a return to something like the previous normality.

Before the pandemic: The art market in 2019

In 2019, the global art market was worth about USD 64.1 billion and was already experiencing a 5% contraction in sales compared to 2018. Taking only auction sales, the contraction was even larger: 17%, according to Art Economics (2020). Indeed, the total value of the art market has not grown substantially over the last nine years. However, the composition of the market has changed, with the very top end of the market (works over USD 10 million) outperforming the mid- and lower levels. Online sales declined slightly in 2019 compared to the previous year and represented about 9% of the market.

The art market is very dependent on supply and the contraction in sales in 2019 compared to 2018 can largely be blamed on consignors not putting works up for auction. This was particularly noticeable at the top level (USD 10 million and over), where the number of works offered shrank by 35%. During the global financial crisis, the total value of the global art market dropped to under USD 40 billion, but rebounded strongly within two years. Other art market crises were in 1990 (when Japanese buyers, who had dominated the market for impressionist and modern works for three years, suddenly pulled out), in 2000–02 after the dot-com boom imploded, and after the September 11 terrorist attacks in the USA.

Impact of the pandemic: From March 2020 onward

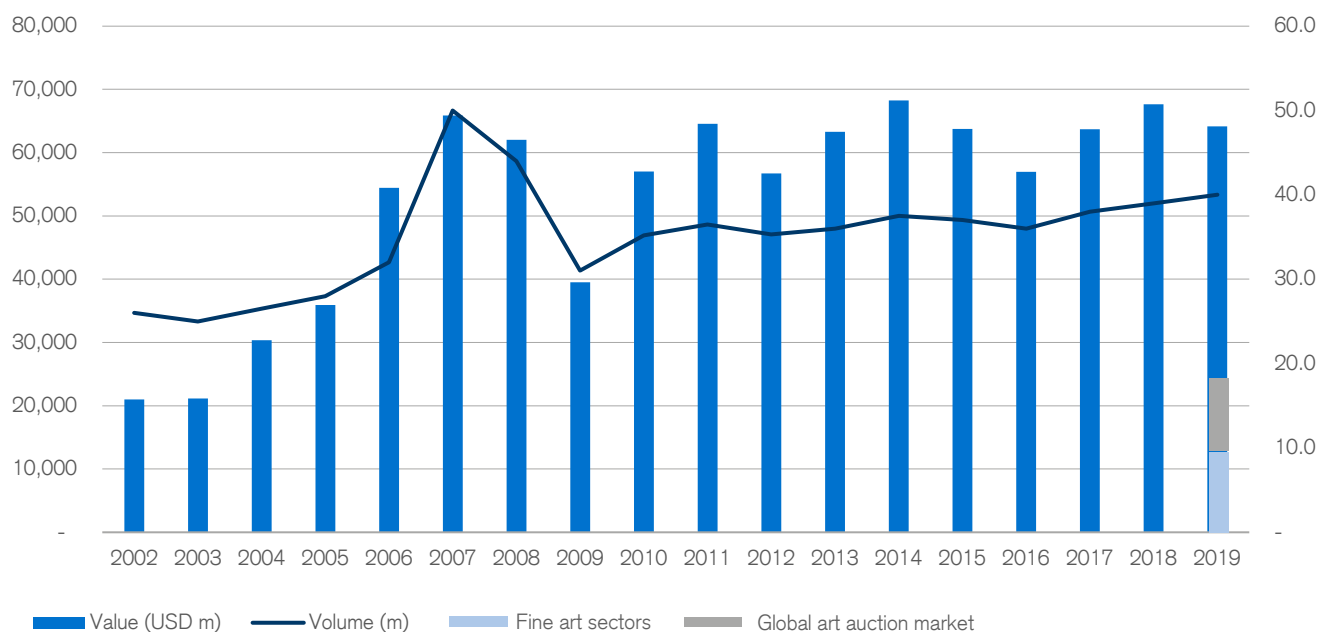
In the first half of 2020, auction sales totaled USD 2.9 billion – the overall majority of which were online only. This represents a decline of more than 50% versus 2019.

In July 2020, Sotheby's reported sales between 1 January and 31 July at USD 2.5 billion, down 25.3% from the equivalent period in 2019; Christie's reported sales of USD 1.4 billion, down 30% from the USD 2 billion made in the same period in 2019. According to the data analyst company Pi-eX, the average price of a lot at auction also dropped significantly, from USD 130,000 in the first two quarters in 2019 to USD 50,000 for the same period in 2020.¹

Alongside this drop in auction totals, it is necessary to note that the gallery sector, which normally represents about 60% of annual art sales versus 40% for auction houses, was also faced with a devastating collapse in revenue. According to a report published in April 2020 by The Art Newspaper and the economist Rachel Pownall, a professor of finance at the University of Maastricht, galleries expected to lose 72% of their annual revenue, with the smallest galleries most affected.

1. <https://www.pi-ex.co/>

Figure 1: The global art market – fine and decorative art and antiques



Exchange rate EUR/USD year-end 2019

Source : Deloitte Tax and Consulting. Data for 2002–08 from the Tefaf art market report “The international Art market in 2011.” Data for 2009–19 consolidated from the Art Basel & UBS Report, “The Art market 2020.”

Figure 1 shows the value and volume of transactions in the global art market since 2002. As of July 2020, the global art auction market was valued at USD 24.2 billion, of which the fine art sectors made up 18% or USD 11.6 billion (–20% versus end-2019), comprised of post war and contemporary art (USD 6.1 billion), modern art (USD 2.9 billion), impressionist and post impressionist art (USD 1.8 billion) and old masters (USD 0.8 billion). According to ArtTactic, evening sales suffered a 57% decline in value in the first half of 2020 due to the COVID-19 crisis².

Marquee summer sales

Traditionally, the art market has had two main seasons for selling high-priced works of art: spring and summer in Hong Kong, London and

2. This analysis considers the eight Hybrid evening auctions spanning a 2-week period in the summer of 2020. These sales include Sotheby’s The Ginny Williams Collection Evening Sale, Contemporary Art Evening Sale and Impressionist & Modern Art Evening Sale on 29th June 2020, Phillips 20th Century and Contemporary Art Evening Sale on 2nd July 2020, and Christie’s four auctions; ONE: A Global Sale of the 20th Century, Hong Kong, ONE: A Global Sale of the 20th Century, Paris, ONE: A Global Sale of the 20th Century, London and ONE: A Global Sale of the 20th Century, New York on 10 July 2020. This analysis is different from other auction analysis conducted by ArtTactic due to the new format presented by these Hybrid sales. This report shifts the focus to the content and performance of each individual sale and auction house rather than comparing current performance to past auction seasons.

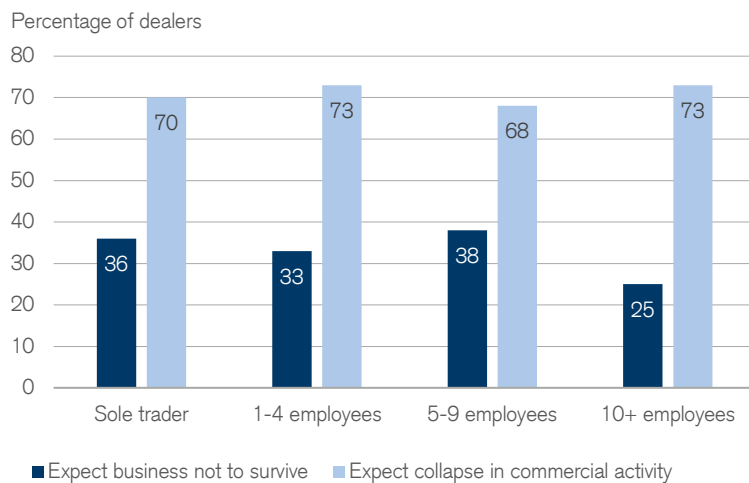
New York, and then autumn, again with sales in the UK and the USA. These “marquee evening sales” have been a bellwether for the whole market, and a public face of the sometimes opaque market.

The various live sales were of course canceled this year due to the global health situation, and the consignments rolled into “hybrid” sessions, live-streamed over several locations and with only a few physical attendees. In addition, the major international art fairs – which are also an indication of how the market is performing – have been postponed to a later date.

These auction sales were successful although clearly showing a decrease from the previous year’s New York May Evening Sales: Sotheby’s 29 June Impressionist & Modern Art Evening Sale scored the top price of the year – at the time of writing – of USD 84.55 million including fees (presale estimate: USD 60–80 million excluding fees, see box) paid for Francis Bacon’s “Triptych Inspired by the Oresteia of Aeschylus” (1981).

The USD 825.3 million total for the first three marquee sales in the table featuring modern and contemporary art showed a 48% decrease over the previous year’s USD 1.7 billion New York May evening sale totals. Sotheby’s “Rembrandt to Richter” cross-category sale on 28 July was not comparable because of its inclusion of Old

Figure 2: Expected effects of the pandemic on business by dealer size



Source: TAN Art Dealer Survey 2020

Table 1: Marquee sales in June/July 2020

| Sale | Pre-sale estimate (without fees, in USD m) | Total (with fees, in USD m) | % sold |
|--------------------|--|-----------------------------|--------|
| Sotheby's 29 June | 262.1–368.4 | 363.2 | 93.2 |
| Christie's 10 July | 332.4–444 | 420.9 | 97 |
| Phillips 2 July | 29.4–41.6 | 41.2 | 100 |
| Sotheby's 28 July | 139.3–200.1 | 192.7 | 95 |

Source: Sotheby's, Christie's and Phillips auction houses

Master material. For Dirk Boll, President of Christie's Europe, Middle East, Russia and India, one surprise of the Christie's sale was a slightly lower participation of Asian clients than he expected. Nevertheless, over USD 1 billion was spent on art over the four sales, and the sell-through rates were excellent.

Another bright spot was the level of guarantees (see box) offered at these marquee sales. While some works, such as the Francis Bacon masterpiece, had been sourced and guaranteed before the COVID-19 pandemic, many were "converted" at the last minute and announced as the sales started. Helena Newman, Chairman of Sotheby's Europe and Worldwide Head of Impressionist and Modern Art notes that "The attitude to guarantees is unchanged since the pandemic, we still have a consistent number of third-party guarantors, both established ones and some new names" (Interview, 30 July 2020).

“ Online sales in the first half of 2020 totaled about USD 285 million

Online and cross-category sales

With virtually all auctions held online, this channel saw a massive increase: global online-only auction sales from Sotheby's, Christie's and Phillips ended up at USD 596.7 million in January to August 2020, up from USD 168.2 million for the whole of 2019 (according to data analysis firm ArtTactic). The Art Basel/ UBS mid-year survey in 2020³ found that the share of online sales rose from 10% of total sales in 2019 to 37% in the first half of 2020, and galleries with the largest turnover showed the highest increase, with those in the USD 10 million-plus segment rising almost five-fold to 38%. Previously, the growth in online sales had been slowing, with just a 4% increase in 2019 over 2018.⁴ All this changed with the pandemic. Sotheby's Helena Newman notes that, while

Buyer's premiums or "fees" are added onto the purchase price on a sliding scale and are paid by the purchaser. Rates are plus 25% on the hammer price for GBP 225,000/USD 300,000; 20% from GBP 225,001/USD 300,001 up to and including GBP 3 million /USD 4 million and 13.5% above that. The vendor might pay a negotiable premium, but this is generally waived for the high-priced lots.

Guarantees are promises given by the auction house to pay a specific amount to the consignor for a work of art, regardless of the outcome at auction. They come in two forms: "house" guarantees where the firm itself agrees to buy the work of art if no bidder comes forward during the auction, and "third-party" guarantees when an outside investor (or group of investors) agree to cover the risk. In return for agreeing to buy at a certain price, the third party is given a financing fee or sometimes a percentage of the "upside" (the difference between the agreed bid and the price realized). Sotheby's uses the word "irrevocable bid" for a third-party guarantee; in all cases a symbol in the catalogue indicates the existence of a guarantee. In many cases, however, guarantees are "converted" and announced shortly before the sale, with third parties stepping up to guarantee a work that originally had a house guarantee.

3. The Impact of COVID-19 on the Gallery Sector; <https://www.artbasel.com/about/initiatives/the-art-market>

4. Hiscox online art trade report 2020

they had 129 online only sales totaling about USD 80 million in 2019, online sales in the first half of 2020 totaled about USD 285 million.

Today, Asian buyers are younger and more engaged in contemporary art than their older peers in Europe and the USA. While they are already comfortable with online bidding, the pandemic has forced bidders in other countries and other age brackets to engage in online technology. Importantly, online sales are also proving to be a powerful pipeline of new clients as highlighted by Dirk Boll, President, Christie's Europe, Middle East, Russia, and India. At Christie's, about a third of new clients come through this channel, although traditionally for lower value items and editions. However, the excitement and "event" aspect of the live auction cannot easily be replicated online, and auction houses will certainly attempt to return to live auctions post COVID-19.

Another profound change is the abandoning of the traditional sales calendar (which dates back to James Christie's days when, in summer, people were not in town in London) at least until collectors feel confident to travel again. Prior to the pandemic, "seasons" grouped sales, exhibitions, art fairs and other social events: Hong Kong in March, New York in May, London in June and so on. The online space has made it possible to hold even small sales, with a rapid response period. This will also free up liquidity in the market since consignors will not have to wait for a suitable sale.

Along with this shift in scheduling, the market has seen a blurring of the traditional categories. Christie's led the way by merging the impressionist, modern and contemporary sections into one 20th/21st century department in June 2020. While this move was about cost-cutting, it also acknowledged the growing dominance of post-war and contemporary art over impressionist and modern art. Due to the pandemic, the major online sales in summer 2020 combined categories, with Sotheby's offering works from Rembrandt to Miró in its 28 July sale. The move was prefigured by the dramatic inclusion of Leonardo da Vinci's *Salvador Mundi* (c. 1500) in a contemporary art sale. It brought in USD 450.3 million at auction in New York in 2017. According to Helena Newman, collectors responded well to combining categories. In the 28 July sale, 16% of clients traditionally in the Impressionist and modern sector bid on the Old Master works. However, not everything went well at Sotheby's sale. A Franz Hals was one of six works withdrawn, presumably because of lack of interest from buyers, and the titular Rembrandt 1632 self-portrait sold below expectations for a hammer price of GBP 12.6 million (estimate: GBP 12–18 million).

Table 2: Private sales at auction houses

| Auction house | 2019 (USD) | 2018 (USD) | 2017 (USD) | 2016 (USD) | 2015 (USD) |
|---------------|------------|------------|------------|------------|------------|
| Sotheby's | 1 bn | 1 bn | 744.6 m | 632.4 m | 697.5 m |
| Christie's | 811 m | 653.3 m | 611.8 m | 935.5 m | 851.2 m |
| Phillips | 171.8 m | 122.2 m | 83.5 m | 67.8 m | n.a. |

Source: Sotheby's, Christie's and Phillips auction houses



Leonardo Da Vinci's "Salvador Mundi;" photo: Ray Tang/Lnp/Shutterstock

Private sales

Private sales have been developed by the auction houses over many years and have been stimulated by the pandemic. Indeed, Sotheby's 2019 private sales total of USD 1 billion puts it at the level of a major secondary market dealer such as Gagosian.⁵ By promoting private sales, auction houses are competing directly with art galleries and the costs are far lower than when a work is sold at auction. In addition, the transaction is kept entirely out of the public view, which is a major advantage from the client's point of view. According to Sotheby's, the artists most traded in private sales include Andy Warhol, Yoshitomo Nara, Eddie Martinez, Sam Francis and Ed Ruscha.

Categories of art

Old Masters

Despite the astonishing price of Leonardo da Vinci's *Salvador Mundi*, the Old Master sector is not a growth field. Sales in 2019 at Christie's and Sotheby's totaled USD 237 million, down 14% from 2018, and the average price for a work sold at auction was USD 197,883.⁶ But Old Masters are traditionally a less volatile market, especially compared with contemporary art. At Sotheby's, for example, Helena Newman notes that Old Masters have held their own for the past 10–20 years and are doing well in Asia. There is, however, a marked division between the top end and the rest in this market segment as highlighted by Christie's Dirk Boll. There are many works by unknown artists that used to adorn the living rooms of baby boomers, which the new generation no longer wants. Hence they are selling at a discount to the purchase price. Furthermore, Old Masters are a complicated category for collectors as they need considerable background knowledge, often have themes that may limit demand, and are short in supply.

The highest prices in 2019 were for Thomas Gainsborough's *Going to Market* (1770s) and J. M. W. Turner's *Landscape with Walton Bridges* (c.1816–19), both of which were sold by Sotheby's for roughly USD 8.8 million each. And in January 2020, Giovanni Battista Tiepolo's *Madonna of the Rosary with Angels* (1735) sold for its estimate (on request) of USD 15 million, again at Sotheby's. Sotheby's Rembrandt to Richter sale featured several Old Masters, including an extremely rare but slightly damaged Paolo Uccello painting, *Battle on the Banks of a River* (c.1468), which sold for

GBP 2.415 million (estimate: GBP 600,000–800,000). Several bids came from collectors of contemporary art.



Old Masters have held their own for the past 10–20 years and are doing well in Asia

Asian art

In Asia, the market for traditional Chinese works of art, which include jades, porcelains and scrolls, has been contracting over the last couple of years, according to Nicholas Chow, Chairman of Sotheby's Asia, International Head and Chairman of the Chinese Works of Art department (Interview 5 August 2020). This development is due to the weakening Chinese economy, the US-China trade war, enhanced foreign exchange controls for mainlanders, and ultimately the fallout from the COVID-19 pandemic.

The highest bid in Asia this year was USD 33.3 million for Sanyu's *Quatre Nus* (1950s) in Christie's Modern and Contemporary Art Evening Sale in July. Sanyu, along with Zao Wou-Ki and Chu Teh-Chun, are stalwarts of the Asian modern art market. As for contemporary art, there has been less interest in Chinese artists such as those from the cynical realism school (e.g. Zhang Xiaogang or Yue Minjun). However, western artists such as Clyfford Still and David Hockney have been successfully offered in Hong Kong SAR this year.

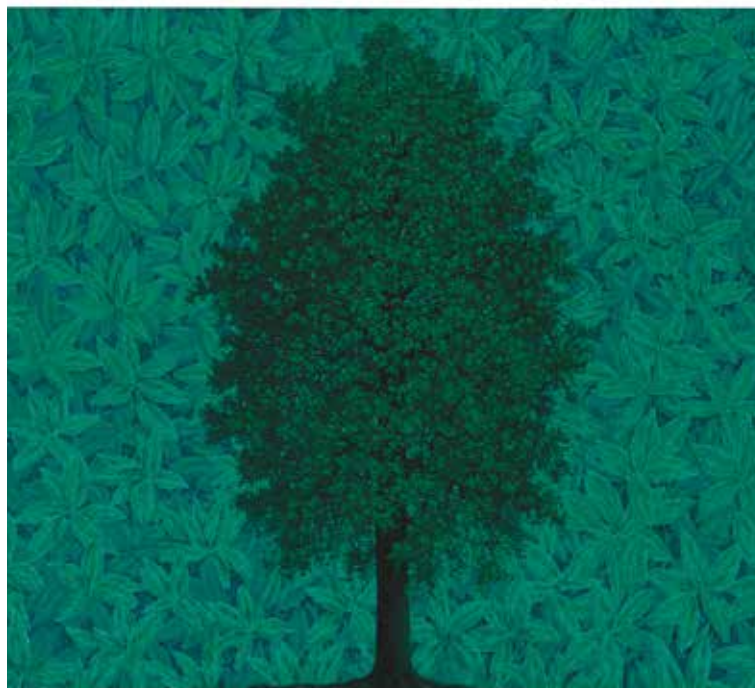
Impressionist and modern art

Once the sector which boasted the highest prices, fueled by Japanese money in the late 1990s, the impressionist art sector now has declined in value compared to modern art and particularly contemporary art. Supply is the issue, and when a highly desirable work does appear, it will sell for a very high price.

5. <https://www.wsj.com/articles/the-art-of-larry-gagosians-empire-1461677075>

6. Old Master Paintings Market Report Summer 2020, ArtTactic

For example, the top price for an impressionist work of art in 2019 was USD 110.7 million for Monet's "Meules" (1890), followed by Cézanne's "Bouilloire et fruits" (1888–90) for USD 59.3 million. However, the artist with the highest auction turnover in the year was Picasso, with 3,548 lots and a total value of over USD 346 million.⁷ By the nature of his long and productive life and great variety of periods, Picasso dominates such listings. But both Sotheby's and Christie's specialists see a growing new market for lesser-known artists in the USD 500,000–USD 5 million range like Emile Bernard, Paul Signac, Georges Valmier, Louis Anquetin and Théo van Rysselberghe to name a few. Asian buyers are especially interested in this sector.



Magritte's "L'Arc de Triomphe"; photo: Christie's Images Ltd. 2020

“ The market for surrealist art has been extremely strong in the last decade

The market for surrealist art has been extremely strong in the last decade, with artists such as Max Ernst, Leonor Fini, Leonora Carrington, Jean Arp, Francis Picabia and Paul Delvaux performing well. According to Sotheby's Helena Newman there is "virtually a separate market for René Magritte." Christie's Dirk Boll calls Magritte a "global blockbuster." In Christie's ONE sale on 10 July, Magritte's "L'Arc de Triomphe" (1962), almost doubled an already high estimate to bring in GBP 17.8 million, which was a surprise for specialists as the painting was not so typical, thereby indicating how strong the market is.

Post-war and contemporary art

This market is the only market to have a continuous supply of works and was the largest sector of the art market in 2019, with 53% of global fine art auction sales.⁸ It is also more volatile than other sectors, being more dependent on confidence and speculation.



Jeff Koon's "Rabbit"; photo: John Lamparski

7. Artprice.com

8. Art Basel and UBS report

Along with other art sectors, contemporary art contracted in 2019, despite the highest price paid that year for Jeff Koons' "Rabbit" (1986), which sold for just over USD 91 million at Christie's in New York. It was followed by Robert Rauschenberg's "Buffalo II" (1964) at USD 88.8 million. In this sector, the biggest auction value goes to Andy Warhol, with 1,693 works sold in 2019 for a total of USD 228,327,15. Like Picasso, Warhol was a prolific artist and worked in a variety of styles. However, his market is contracting slightly if we compare it to the total value of USD 243 million in 2018 and USD 269 million in 2017.

The impact of younger collectors, notably Asian, is most noticeable in the contemporary art sector and this also plays into art sold online: according to Dirk Boll, "The younger the art, the better it sells online. Young art has a younger public that also comes into play. And there are not the issues with condition which sometimes occur in other sectors."



Portrait by Amoako Bofo; photo: James Veysey/Shutterstock

New trends

Even before the pandemic, two clear trends were apparent, and these were maintained in 2020. Women artists and artists of color remain highly sought after, with a corresponding increase in prices – new records were set in 2019 and 2020 for established artists such as Louise Bourgeois (USD 32 million), Remedios Varo (USD 6.2 million), Helen Frankenthaler (USD 7.9 million), Ruth Asawa (USD 5.38 million), Vija Celmins (USD 6.6 million) and Leonor Fini (USD 980,000). But there were also extraordinary rises made for newer names: Alice Rahon (USD 512,000), Tschabalala Self (USD 371,250), Marlow Moss (GBP 237,500), Nina Hamnett (GBP 21,250), Simone Leigh (USD 337,500) and Loie Hollowell (GBP 359,250).



Importantly, from a collector's standpoint, the market has remained consistent

Male artists of color were also sought after. In 2019 and 2020, new price highs were set for Leonard Drew (USD 105,000), Jordan Casteel (GBP 515,250), Thornton Dial (GBP 225,000), Titus Kaphar (USD 350,000) and Marcus Jamal (GBP 11,875).

Another continuing trend is the identification of a few up-and-coming "hot" artists, often of color as well. A work by the Ghanaian Amoako Bofo, appearing at auction for the first time in July 2020, sold for GBP 675,000, shattering its presale estimate of GBP 30,000–50,000.

Conclusion and outlook

The art market, like other markets, is still adapting and seeking new solutions after the shock of the COVID-19 pandemic. A foreseeable development is the contraction of the art market overall, with a reduction in the number of art galleries in particular, and only the largest ones surviving. Importantly, from a collector's standpoint, the market has remained consistent. There will likely be lower auction totals and many art fairs will not return to the real world in the foreseeable future. The June/July fine art auction sales have nevertheless shown that the art market remains receptive for high-end works despite the recorded drop in sales in this category.

Encouragingly, according to the Art Basel/UBS mid-year survey, many high net worth collectors remained active in the market, after marking a pause at the beginning of the crisis. The report found that 92% had purchased a work of art in the first six months of the year. Perhaps even more surprisingly, across the 360 collectors in the USA, UK and Hong Kong SAR surveyed, 59% felt the pandemic had increased their interest in collecting, with 31% saying that it had significantly done so.

Until the global health situation improves and collectors feel safe to travel, we believe the biggest change will be an acceleration in the move toward digital technologies, which is likely to become permanent in the case of many auctions – the problem for art galleries will be how to navigate this “new normal” and continue to exhibit and support their artists in the real world. On a positive note, there are new collectors coming onto the market thanks to digitalization. There is a broadening of the base from all geographic regions and Asia is particularly interesting. With the move to online transactions, there should also be an increase in transparency and liquidity.

Collectors are still likely to favor artists with a proven track record and museum validation over more speculative works and young unknowns. Women and artists of color are likely to continue their upward trajectory. The new cross-category sales dictated by the online format could benefit some previously weaker sections such as Old Masters and the decorative arts.



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2018 Concorso d'Eleganza Villa d'Este in Cernobbio, Lake Como, Italy; photo courtesy of BMW Group Classic

Classic cars: Continuing to live the dream

Adolfo Orsi, Jr.

Whereas cars are nowadays regarded by many owners as little more than functional mobility machines, there was a time when cars represented status, exclusivity and freedom. It is no understatement to say that Henry Ford and the Model T literally changed the US way of life and the whole 20th century (Ford sold 15 million Model Ts between 1908 and 1927). Automobile races and personalities like Nuvolari, Fangio and Moss were the heroes of their era, when the sound of a racing car and the thrill of a race attracted millions of enthusiasts. For dignitaries and celebrities, owning a Rolls-Royce or later an Alfa Romeo or a Ferrari represented the peak of individual success. Classic car collectors are continuing to live this dream.

Classic car collecting is relatively young

In 1927, the first commemoration of the London-to-Brighton Run was held. This event is still organized today and is open to cars manufactured before 1904. It commemorates the Emancipation Run held in 1896 in protest of the “Red Flag Act,” which required self-propelled “automobiles” (at the time mostly powered by steam) to be preceded by a person waving a red flag or lantern to warn bystanders. The first Club was the Bugatti Owners Club, established in 1929 in the UK. At the time, car collecting was still only for a limited number of enthusiasts. From the UK, collecting spread to Australia, the USA, France and Italy. These first pioneers created museums to preserve the older vehicles that were otherwise destined for scrapyards. The main difference between a car exhibited in a museum and a car owned by a collector is its use.

Until the late 1970s/early 1980s, there was no real classic car market, but only a few specialized traders and auctions. The cars were restored and resprayed to be driven, without a great deal of attention given to their originality – unlike the

painstaking measures and dedication taken today to restore and maintain them. In the early 1980s, car collecting was booming. Famous events were revived, such as the Mille Miglia (thousand miles) open road race in Italy, historic races in the UK and USA, and “concoirs d’élégance” events (competitions of elegance and originality) in the most fashionable places around the world. These events fueled the market and the prices of classic cars, especially for certain manufacturers. The “trend setter” was Ferrari, with prices doubling from year to year. A speculative market was born, helped also by the lack of tax on profit in many countries. In 1989/early 1990, the market peaked and, in 1990, the bubble burst and the market literally collapsed.

From 1990 until 1995, there was hardly any demand and prices fell by 80%–90% in many cases. From 1996 onward, collectors started to purchase their beloved cars again for reasonable prices and interest slowly picked up again, primarily for the popular sportscars from the 1930s, such as Bentley and Alfa Romeo, followed later by sportscars from the 1950s/1960s such as Ferrari, Aston Martin and Maserati.

Car collecting is a relatively young market compared to other collectibles such as fine art and antique furniture, which date back centuries. It is also influenced by generational shifts. The market is influenced by buyers who are much younger today than before. Forty years ago, the dream car for a collector was a Rolls Royce Silver Ghost; today it is a Porsche 911. A classic car is a historic automobile that tells the history of the world around it. It shows the development of engineering and industry, lifestyles and fashion, and, for the racing cars, the story of motorsport.

Maintenance and use are key

A newcomer should know that cars are not like other collectibles. They need to be driven regularly and should not be neglected at the risk of ovalized tires, binding brakes or simply flat batteries. Garages need to be dry to avoid corrosion and deterioration of the paint and upholstery. Maintenance should be entrusted to shops specialized in the particular car make, with experience and knowledge in how to repair collectible cars and find original spare parts. Fortunately, these specialists are now very widespread regionally. Thirty years ago, organizing transport of classic cars was a problem. Today, classic cars can be safely transported relatively cheaply and quickly over thousands of kilometers. Insurance is not a problem; in several countries, classic car insurance is less expensive than regular car insurance. Storage is also no longer a problem as there are classic car lounges to house collectible cars.

“ Classic car collectors purchase their cars depending on their goals

Classic car collectors purchase their cars depending on their goals, whether it may be cruising in a dream car or participating in rallies, historical events and races. But only special or rare cars will end up at the most important events. Purchases take place through auctions, specialized traders or private sales. The best way

to buy a classic car is to have it inspected by a specialist before closing the deal. This service involves a fee, but is highly worthwhile in helping to assess authenticity and condition, and helping to avoid critical flaws like corrosion, for example. The fee for checking the originality of the main components and documentation, and test driving a car is generally a few thousand US dollars. The fee for an authenticity check of the chassis frame, the engine/gearbox, differential and wheels can be USD 20,000 or higher. It is also important to check that the documents comply with the actual regulations of the collector's country.

A classic car's value is influenced by several factors, especially by the originality of its main components: the color combination and the engine should be the same as when it left the factory. It is also important to know the chain of previous owners, to know how many times it has been restored and by whom. There are cars that still have their original paint (with an aged patina) and upholstery, but these are hard to come by. Many so-called “preserved” cars sell for more than the vast majority of cars that, to the untrained eye, look shiny and more appealing. The most valuable car to this date is the Bugatti Type 57S Atlantic, two of which are still in existence, and one of which is believed to have been sold several years ago for USD 70 million.

“ Auction turnover represents around 20%–25% of the whole market

In recent years, two new trends have been heavily criticized by the classic car community. There are car-tuning companies that offer “re-imagined” classic cars. Imagine an old car (a Jaguar E Type, a Porsche 911, or an Alfa Romeo Giulia GT) restored far beyond its original quality and specifications to essentially become a new car, in general faster. Another development is the decision taken by Aston Martin and Bentley to restart the production of Sanction II or Continuation Series cars, i.e. recreating old cars identical to the originals, but powered and supported by the latest digital technology.

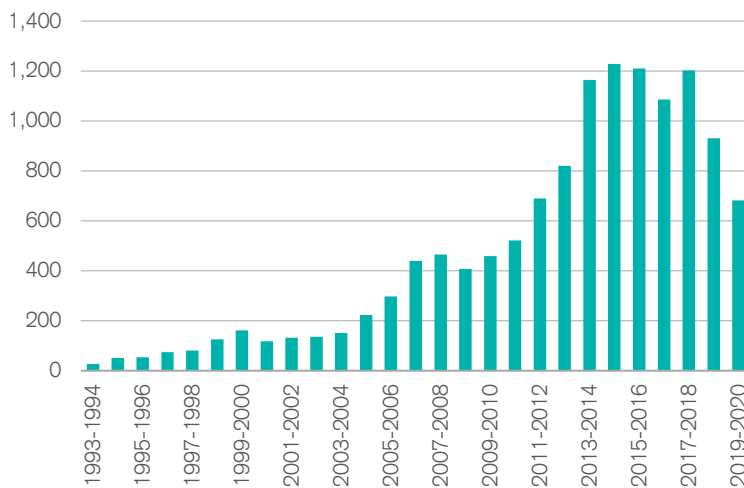
The classic car market

The only available and reliable data on the classic car market is sales data from auctions. However, auctions represent only a fraction of the market. First, there are countries where auctions are not organized at all and, second, the most important cars are actually seldom sold at auctions. For example, one of the most iconic cars in the collectors' world is the Ferrari 250 GTO. In the last 30 years, many have been exchanged privately. Thousands of less-important cars are also purchased and

sold through different channels or through minor auctions, which are not accounted for. Hence auction turnover represents around 20%–25% of the whole market. The key global auction houses are RM Sotheby's (the leading classic car auction house) and Bonhams. Others include Barrett-Jackson, Gooding & Co. and Mecum in the USA, H&H Classics and Silverstone in the UK, and Artcurial in France.

The overall classic car market is estimated to be worth around USD 4–5 billion, with the following main markets in descending order: USA, Europe (UK, Germany, France, Italy, Switzerland, Netherlands and Belgium), Australia, Japan and some South American countries (mainly Argentina and Mexico). There are a few big collections in Russia. In China, unlike very exclusive new cars for which China is becoming the biggest market worldwide, the classic car market is practically non-existent. While there is growing interest, customs regulations are a hurdle (classic cars are categorized as used cars, the import of which is not permitted or requires special permission subject to 100% duties). Moreover, classic cars are normally not allowed on Chinese roads. Of the 20 most important collectors in the world, 16 are from the USA.

Figure 1: Total auction turnover (USD)

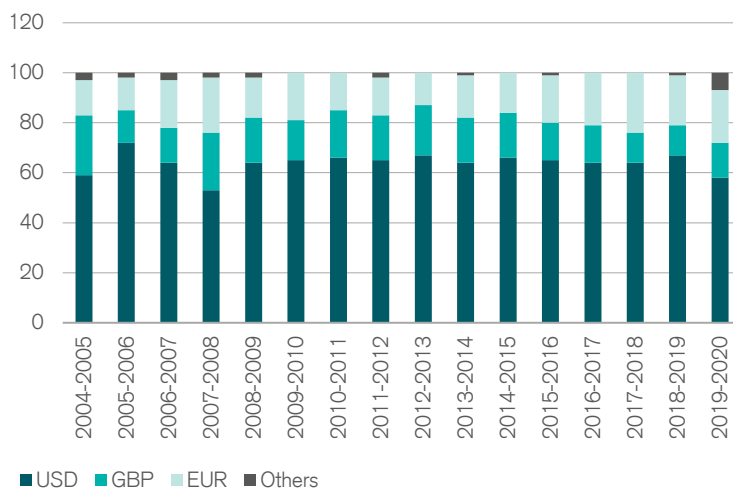


Classic Car Auction Yearbook 2019-2020, by Adolfo Orsi, Historica Selecta®



The classic car market has been mostly anticyclical

Figure 2: Percentage turnover by country



Classic Car Auction Yearbook 2019-2020, by Adolfo Orsi, Historica Selecta®

The number of cars offered at the most important auctions has increased from 1,521 in the 1993–94 season (from 1 September to 31 August of the following year) to over 5,000 in the seasons from 2014–15 to 2019–20.

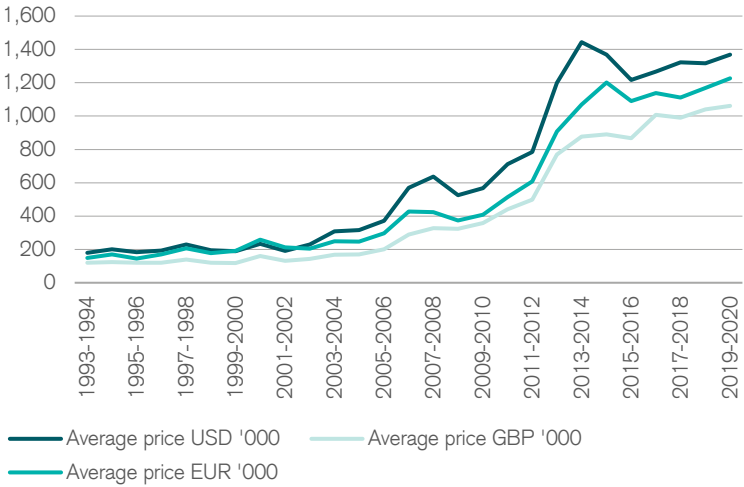
Figure 1 shows that annual auction turnover rose from USD 22 million in the 1993–94 season to over USD 1 billion in the seasons from 2014 until 2018, dropping back to a USD 666 million in the last 2019–20 season. If we look at the value of individual cars, only one car was sold for over USD 1 million in the 1993–94 season. Starting from 2004–05, the number of “USD 1 million cars” steadily climbed to reach over 200 units in the seasons from 2013 until 2018 before decreasing this last 2019–20 season to 106.



The value increase in the medium term can be illustrated by the average prices (final price, including buyers commission) reached at auction by two iconic models, the Mercedes 300SL “Gullwing” (Figure 3) and the Ferrari F40 (Figure 4). When calculating the net capital revenue, around 15%–25% (less now with virtual auctions) is represented by the amount of auction house commissions charged to both the seller and buyer. Hence the investment in a classic car, purchased and sold via auction, rarely offers a tangible return in the short term. The classic car market has been mostly anticyclical, also in the last financial crisis in 2008. It was helped by low interest rates and by expectations of low returns in normal financial investments. But, after the peak reached in 2015, prices of classic cars started to find a new base and the prices of some models that had risen more than average began a soft landing. In the 2018–19 season, total turnover fell below the psychological barrier of USD 1 billion, also influenced by the uncertainty over Brexit and potential import duties in the USA.

Auctions organized in the period from 1 September 2019 to 29 February 2020 (the first six months of the 2019–20 season), still pre-COVID, saw a 15% drop in turnover and a 5% drop in the number of cars, but the sell-through rate (the third most important number to consider in understanding the classic market) was solid at around 74%. In early March, a group of “normal” auctions took place in the USA during the Amelia Island Concours

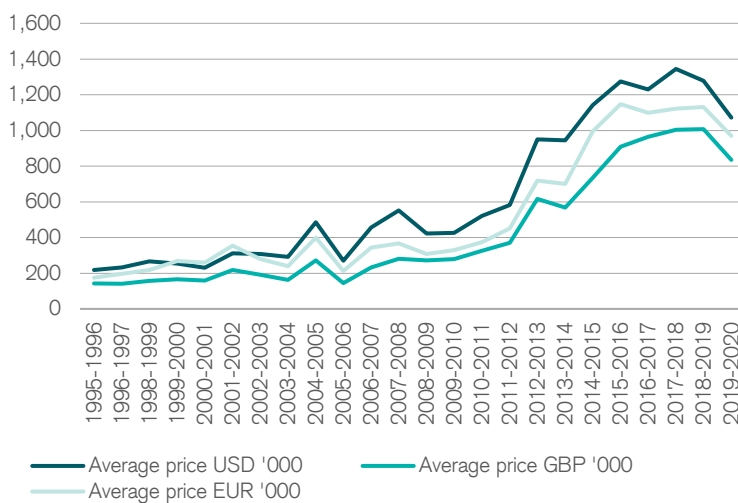
Figure 3: Average prices for Mercedes 300SL “Gullwing”



Source: Classic Car Auction Yearbook 2019–2020



Figure 4: Average prices for Ferrari F40



Source: Classic Car Auction Yearbook 2019–2020

d'Elégance in Florida at the same time as the COVID-19 pandemic began spreading around the world, with Asia and Europe at the forefront. Since then, the vast majority of the 2020 classic car events have been canceled and with them the auctions that are often organized during the events.

2020 developments and trends

Since the start of the COVID-19 pandemic, auction houses have accelerated their online sales and the result of the second six months (from 1 March until 31 August) has been a 42% drop in turnover compared to the same period in 2019, with a 69% sell-through rate.

The sell-through rate has not changed greatly, but the big decrease in turnover was heavily influenced by the cancellation of the events taking place every year in August on the Monterey Peninsula. Historic races, other meetings and the most important auctions of the season are normally held in the week preceding the Pebble Beach Concours d'Elégance, the most important meeting in the world. Classic car enthusiasts undertake their annual pilgrimage to California to show their cars and bid on new ones. The turnover of the auctions held in Monterey in the last ten seasons represented around 30%–35% of the total annual turnover in classic cars. Compared to last year, the August Online 2020 auctions turnover was down 75% to only USD 57 million.



From left to right: 1928 Bugatti Type 35C Grand Prix, 1937 Bugatti Type 57S Atalante and 1934 Bugatti Type 59 Sports sold at record prices by Gooding & Co. in London on 05/09/2020; photo courtesy of Gooding & Co.

The sale catalogs of the internet auctions that replaced the Monterey sales lacked the really important cars. The top price has been for a 2001 Ferrari 550 Maranello (tuned by Prodrive with a race history), which sold for USD 4,290,000 (including commission). In August 2019, the top price at the Monterey auctions was for a 1994 McLaren F1 (the three-seater road car), which sold for USD 19,805,000. Eight other cars sold for over USD 5 million. In August 2018, the top price was for the 1962 Ferrari 250GTO at over USD 48 million, with six other cars exceeding the USD 5 million mark. This last August, only one car with an estimate of over USD 5 million (a 1930s Alfa Romeo 8C) was offered, but did not reach the reserve price.

“
More than just one sense is needed to understand and appreciate a car

Whereas other collectible categories such as watches seem to have transitioned relatively successfully to online auctions, classic cars are more difficult to trade online. Cars often cannot be properly examined by photo or video. It is necessary, for example, to look at cars from a distance to gauge the straightness of the lines and the general look, and more close-up to assess the quality of the paint and chrome, to feel how the doors open and close, to evaluate the proper fitting, to touch the upholstery and feel its quality, to smell the leather and hear the sound of the engine. More than just one sense is needed to understand and appreciate a car.

The much-awaited market health check was the Gooding “Passion of a Lifetime” auction, which was first programmed on 1 April, canceled because of COVID-19, and then rescheduled in London on 5 September 2020. This was also the very first auction organized by Gooding & Co. outside the USA. The auction featured 15 high-quality sought-after cars including a 1934 Bugatti Type 59 once owned by Belgium’s King Leopold III and a 1961 Aston Martin DB4 GT Zagato, one of just 19 ever made. This was the very first sale held physically by an auctioneer in months. The result was very good, with all the cars except one being sold even if slightly below estimate. The auction achieved a number of world records and over GBP 34 million in turnover. The top price was GBP 9.535 million for the 1934 Bugatti Type 59, the highest-ever price for a Bugatti at auction, beating the historical

record price paid for a Bugatti Royale 33 years ago. A 1971 Miura SV was sold for GBP 3.207 million, an all-time record for the model. The other 1937 Bugatti Type 57S Atalante (formerly owned by Earl Howe, a very well-known personality in motorsport) was sold for GBP 7.855 million.

These prices were reached even if some of the cars were Swiss-registered and therefore liable to additional customs duties if imported into the EEC or USA. While it is too early to assess the full extent of the impact of the current state of the global economy on the classic car market, this auction has demonstrated once more that rare cars of excellent quality and pedigree attract considerable interest when they come to the market, regardless of the business cycle.

Outlook and “youngtimers”

Classic car collecting is a passion that tends to transcend the ups and downs of the global economy. The inability to hold live rather than digital auctions for much of 2020 has certainly impacted the liquidity of the auction market and led to a sharp decline in turnover compared to 2019. Data on private sales is not available to assess how private transactions have fared.

Rare-quality cars, when they come to the market, continue to show strong increases in value even in adverse market conditions. While it is always safer to buy quality rather than be attracted by the price, for cars in the USD 150,000–400,000 price range such as the 1959–62 Aston Martin DB4, 1964–66 Ferrari 330GT 2+2, 1972–75 Ferrari Dino 246GT for example, auction houses are now offering cars without reserve more often. Given the uncertainty of present times, these sales without reserve could open up the possibility of purchasing cars for less than their normal market price.

Classic cars have mostly been popular among baby boomers, but the new generation is not indifferent either. While classic cars may not necessarily represent the dream cars of today's millennials, there is a vibrant group of young collectors who are using and restoring cars built in the 1980s and 1990s as part of a new niche sometimes referred to as “youngtimers,” which is likely to grow over time.



Adolfo Orsi is a historian of Italian motorsport, noted collector car expert, specialist in authenticity and staunch advocate of preservation. He has coordinated and overseen the restoration of some of the most significant Italian cars ever produced. He has curated numerous historical exhibitions and, for the past 25 years, co-authored the Classic Car Auction Yearbook, a historical reference book sponsored by Credit Suisse that provides an in-depth and unique analysis of top international auction sales. He has also served as Chief Class Judge of the FIVA Award at the Pebble Beach Concours d'Elégance since its inception in 1999 and has been Chief Judge of the Ferrari 60th and 70th, Lamborghini 50th and Maserati 100th Concours.



The famous wines of Bordeaux, such as Château Margaux, are sold while still in barrel; photo: Gavin Quinney

Fine wines beyond sense and taste

Philipp Schwander

With an estimated USD 5 billion sales per year, the market for fine wines is a significant collectibles category. Investment grade wines, like other collectibles, require specialist knowledge – going beyond mere financial expertise – to deliver economic success. This overview examines some of the key elements that need to be taken into account from an insider’s perspective.

Fine wines at a glance

Table 1 shows the share of the individual growing regions/countries over the last ten years in the fine wines market according to Liv-ex wine exchange. The weight of the once undisputed leader, Bordeaux, has declined over the years, while Burgundy, Italy and Champagne have emerged as the winners.

In terms of financial returns, **Figure 1** (page 38) shows the development of different wine regions in comparison with the MSCI World

and the gold price (all in GBP, January 2004 to August 2020, and indicating the annual average increase in value over the whole period). While Burgundies performed well, having enjoyed an unprecedented bull run in recent years (10.2% p.a. in GBP terms), even for them profitability is still below the trend in the gold price (11.8% p.a.). Champagne is underrated, having even surpassed the Liv-ex Bordeaux Legends 40 index. Notably, wine tends to generally fluctuate less than financial assets (see 2008–09). Until about 2008, the fine wine market was a treasure trove for resourceful investors. Then, from around 2009 onward, the internet and globalization allowed producers to make better use of the market’s potential. Owing to the increased market transparency, they were able to ask for significantly higher initial sales prices and thus retain some of the profits expected in the secondary market.

Compared to shares, wine involves physically investing in a product that must be stored, insured and, if necessary, transported. Moreover, counterfeit wines are a problem. It cannot be assumed that every fine wine can be sold at a quoted market price and, in general, sales are often lower than at the stated market prices.

Table 1: Share of value of selected wine regions and countries

| | 2010 | 2015 | 2019 | 2020 end-August |
|------------|-------|-------|-------|--------------------|
| Bordeaux | 95.7% | 74.7% | 54.5% | 44.8% |
| Burgundy | 1.0% | 5.9% | 19.5% | 16.4% |
| Champagne | 1.3% | 5.9% | 8.8% | 8.6% |
| Italian | 1.1% | 6.8% | 8.8% | 15.2% |
| Rhône | 0.5% | 2.2% | 3.0% | 3.1% |
| California | 0.1% | 2.2% | 2.3% | 5.8% |

Source: Liv-ex, The Fine Wine Market

Less sought-after products are often sold at significantly lower prices, especially in auctions, resulting in a substantial bid-ask spread of often around 25%. Furthermore, unlike most financial products, wine does not last forever. Currency fluctuations and taxes also play a crucial role (see further on). Therefore, anyone not interested in wine per se can achieve the same goal more safely and efficiently with other investments. On the other hand, if we use owner-occupied residential property as an analogy, wine lovers can have the pleasure of investing part of their wealth in a passion asset. A good example in this respect is the English model of the wine merchant who is responsible for the procurement, storage and subsequent sale of the wine.

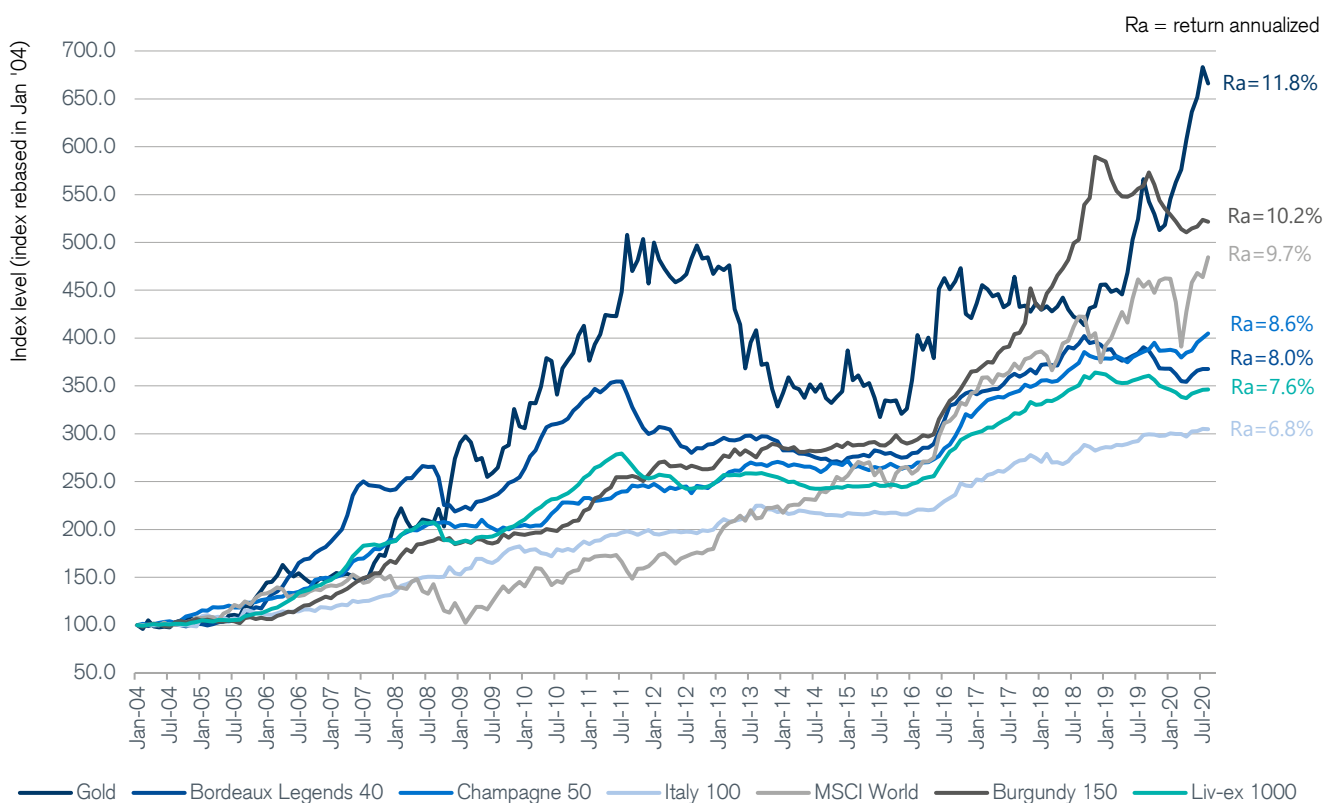
Qualitative prerequisites for investing in wine

When analyzing which wines are worth investing in, it is often only prices or the potential appreciation in value that are considered. In fact, investors face serious risks if they only take these aspects into account. It is also important to pay attention to the following criteria:

Storage and transport of the wines to be purchased

High-quality collectors' wines are only lightly filtered and are therefore less microbiologically stable. For example, populations of yeast and lactic acid bacteria may still be in the wine and could have adverse effects (e.g. premature aging or turbidity) at a high storage temperature. The most acclaimed wines, however, are often resold in international trade and sometimes go on an odyssey with less-than-advantageous transport conditions. The ideal storage temperature is between 11 and 14 degrees Celsius – and above all it has to be fairly constant – with a humidity of 68%–72% (not more than 80% or the labels will be affected, and not less than 60% or the corks will dry out and shrinkage may occur), and it is recommended to keep bottles in their original case (e.g. a six-bottle wooden box). Hence, proper storage including insurance can cost between USD 1.50 and USD 2.50 per bottle per year.

Figure 1: Liv-ex sub-indices versus gold and MSCI World
(January 2004 - August 2020, in GBP*)



* Developments in this graph are in GBP and can therefore differ from previous illustrations in the publication due to the currency effect.

Source: Liv-ex, Bloomberg

Choosing wines that can age

In addition to choosing the right wine, the ability of a wine to age is fundamental when investing. For a wine to age and improve, there are many subtle factors involved and the period of aging for a variety of wines is often very different from the widely accepted guidelines. At the moment, Italian wines are popular because they are still attractive in terms of price. The focus is on wines from Tuscany and Piedmont. Unfortunately, however, many wines from these two regions (even famous estates) never last as long as the great Bordeaux. Many Brunello di Montalcino should not be stored for much longer than 15 years, with the same applying to Barolo and some of the “Super Tuscans” with Bordeaux grape varieties. If these wines are purchased young and stored under the correct conditions, the risk of them deteriorating is low. The problem is the purchase of older vintages where continuing to store them can be risky.

Burgundies are better suited to longer storage than Italian wines. However, their low tannin content and fragile structure make them much more vulnerable to poor storage than Bordeaux wines. Therefore, when buying expensive Burgundies, it is essential to know how the previous owners stored them and especially how and how often the wines were transported. The more previous owners and movements, the higher the risk.

“ Experts estimate that around 20% of the most famous wines are counterfeit

Counterfeit wines

Experts estimate that around 20% of the most famous wines are counterfeit. This is an extraordinary figure. There have been considerably more sales of wine legends like Cheval Blanc 1947 or Petrus 1961 than have ever been produced. Wine fraud is particularly widespread in the Far East. The counterfeiting of older vintages is not that difficult because the labels are quite simple from a printing aspect and easy to reproduce. In addition, there are wines that come in their original bottles but have been refilled (the internet is full of offers for empty bottles of famous wines). The lack of knowledge of many collectors also allows for widespread

wine fraud. In 2014, for example, in the biggest wine scandal to date, Rudy Kurniawan was found guilty of selling some blatantly forged wines with an estimated value of USD 100 million. Many of these wines are still in the cellars of collectors. The problem is somewhat similar to the art forger Beltracchi, from whom some of his “originals” from famous painters still exist. It is therefore essential to consult an expert when thinking about purchasing particularly rare and sought-after wines. Investors should also keep in mind that internet auctions or auctions by disreputable vendors are often used to dispose of poorly stored or counterfeit wines.

“ Organic and biodynamic wines are becoming increasingly popular

Natural wines

Organic and biodynamic wines are becoming increasingly popular in high-quality estates. In addition, there are more and more so-called “natural wines” (not a legally protected term), whose advocates aim to offer an alternative to the so-called “industrial wines” with products that are as natural and unprocessed as possible. Some of these wines are highly sought-after and fetch considerable sums. The production of such wines requires expertise and appropriate technical equipment, otherwise they can quickly spoil. There is also another often-concealed problem that affects organic winegrowers in particular: it has unfortunately become fashionable these days to produce wine with the lowest possible sulfur content. Sulfur has been used since ancient times in the form of sulfur dioxide (SO₂) for disinfecting containers and, above all, against browning (oxidation) of the wine. The SO₂ binds the oxygen and thus prevents oxidation and the development of bacteria and wild yeasts. Unsulfured or weakly sulfurized wines age quickly and can result in oxidative faults. Regrettably, many producers ignore this important technicality and do not use enough sulfur, with the result that their wines are much less long-lasting. A less serious problem today is the cork-like taste (goût de moisi) in older vintages attributable to chloroanisole from wine cellars, which forced some famous producers (including Bordeaux) to completely renovate their cellars.

Currencies and taxes

A leading rarities dealer from Switzerland summed it up – up until 2008, he made considerable profits with his portfolio of rare wines. After that it became increasingly difficult. Between 2008 and September 2020, the euro fell 35% against the Swiss franc and the US dollar fell close to 20%. In contrast, the wine business in the key English market, for example, benefited substantially from the weak pound (–47% against the CHF) and experienced outstanding export sales and profits. Hence people who build up large-scale wine portfolios should consider the longer-term development of their chosen currencies.

“
A common mistake is that, when choosing wines, people tend to be influenced by personal preferences

Taxes and legislative changes can have a significant impact on a wine investment. When New York changed the regulations in 1994 to allow wine auctions, the US share of the fine wine market soared. In 2008, the tax on wines was abolished in Hong Kong SAR, which led to the city becoming the most important Asian wine hub. The 25% tariff introduced in October 2019 by the USA on EU wines with less than 14% alcohol led to a plunge in exports in the countries concerned (France, Spain, Germany and the UK).

Reviews by wine critics

Robert Parker in the USA was one of the world's most influential wine critics for many years. If he gave a wine a high score, it would have a significant effect on the sales price. Wines with a maximum note of 100 “Parker Points” are still highly sought after by collectors. However, 100 points have often been awarded in barrel tastings, only to be later corrected downward (e.g. Bordeaux vintage 2000). Parker sold his magazine, the Wine Advocate, in 2012 and completely withdrew from wine reviews in 2019. Besides the Wine Advocate, which has since been published by various specialists, the most influential wine

critics currently appear to be the journalists Neal Martin and Antonio Galloni (both from *Vinous* magazine) who often prefer less powerful, more elegant wines than Robert Parker, who had a preference for bigger wines. Allen Meadows for Burgundy and Jancis Robinson are also highly respected wine critics. However, since critics who provide good reviews are cited more often and receive more publicity, it is not surprising that we have been seeing far more top notes for some time now and the sales effect of wine scores has been diluted. The 100-point rating system nevertheless still seems to be gaining ground internationally.

Lucky numbers and other figures

For Chinese buyers, not only the quality of the vintage, but also lucky numbers can influence an investment. According to long-time China insider Urs Buchmann, CS Vice-Chairman Greater China, the years 2019, 2018, 2016 and 2011 are considered to be especially promising. In contrast, 2015 and 2014 vintages are held in less esteem. No doubt, another special year was the turn of the millennium (2000).

The most important regions and their wines

A common mistake is that, when choosing wines, people tend to be influenced by personal preferences. There are many excellent wines in the world that are not in demand in the secondary fine wine market and are therefore unsuitable for investment purposes. The following section discusses the most sought-after wine regions and producers to consider when investing in fine wine. The list is not exhaustive and constantly changing, and also includes some of the vintages from the respective regions that might appeal most to collectors.

Bordeaux

Bordeaux is still the benchmark for wine and is the most important and, above all, reliable region for wine investments. Overall, fine red Bordeaux from great vintages can age effortlessly for decades, the brands are well known, production is large-scale and market penetration is excellent. En primeur (wine futures) prices spiked for the first time with the 1996 vintage, followed by further price hikes with the 2000, 2005 and 2009 vintages. People who invested in the outstanding 2009 and 2010 vintages have lost money to date because the producers' offer prices were far too high. In 2011, prices peaked due to unprecedented demand from China, after which investors increasingly turned to wines from Burgundy and other regions. New investment opportunities only opened up with the 2019 vintage as, despite its excellent quality, the price was 15%–30% lower than the 2018 vintage.



Domaine de la Romanée Conti Wines; photo: James Andanson

By watching the market closely, investors can also profit from a number of wineries in the short term, even if they are not important brands. For example, the price for Les Carmes Haut-Brion 2016 doubled in a short time. In the meantime, the quality of some of the “Super Seconds” is often now on a par with the First Growths, but with high prices. In the long term, it pays to invest in old well-known brands such as Pichon-Lalande, Calon-Ségur and Canon. “New” wines like Valandraud, Quintus or Magrez Fombrauge generally do not perform well. Investors in Bordeaux should also consider buying en primeur large bottles as the difference in price is relatively modest, but the potential increase in value is significantly higher than with 75 cl bottles.

Most important brands: Lafite-Rothschild, Mouton-Rothschild, Margaux, Latour, Haut-Brion, Petrus, La Mission Haut-Brion, Cheval Blanc, Ausone, and, in small quantities, Lafleur and Le Pin.

Blue chip popular brands: Pichon-Lalande, Lynch-Bages, Beychevelle, Calon-Ségur, Canon, Petit Mouton.

Top recent vintages: 2019, 2016, 2015, 2010, 2009 and 2005.

Burgundy

The rise in the prices for Burgundy is staggering – in 2019, Burgundy’s share of sales at Sotheby’s auction house was 50%. This small wine region is home to the world’s most sought-after and expensive wines. The choice of producer and vintage are both critical, and the quantities produced are tiny, which makes the area especially interesting for collectors. Red wines from 1999 onward are likely to be more reliable for further ageing, while wines of previous vintages are sometimes more difficult to predict. White burgundy is more problematic because its stability is sometimes not guaranteed. For example, “premoxy” or premature oxidation created huge problems for vintages between 1995 and 2013, possibly due to a lack of sulfur in the wines. In contrast to Bordeaux wines, a storage temperature between 11 and 14 degrees Celsius is much more important for Burgundies as they are particularly sensitive to high temperatures.

When buying Burgundies, investors should pay attention to how they will be transported as well as their previous storage conditions. However, unless they are purchased directly from a producer or importer, Burgundies are less attractive as an investment at the moment as prices in the secondary market are extremely high and it is unlikely that many established wines will continue to rise in value to the same extent. The wines of Domaine de la Romanée Conti are most in demand, followed

closely by Armand Rousseau and Domaine Leroy. However, it is difficult to find reasonable quantities of these wines in the secondary market. Incredibly high prices are now causing buyers to turn to other Burgundy growers who just a few years ago were fairly unknown to a wider group of buyers. But a collapse in prices is unlikely. Burgundy, for example, is much better suited to Chinese cuisine than Bordeaux, and is more in keeping with the current taste for elegant wines that are not overly rich in tannin.

Most important brands: Domaine de la Romanée Conti, Armand Rousseau, Domaine Leroy, Roumier, Sylvain Cathiard, de Vogüé, Dujac, Comte Liger-Belair, Méo-Camuzet, and Rouget.

Top recent vintages: 2016, 2015, 2012, 2010, 2009 and 2005.

Champagne

Owing to the COVID-19 pandemic, sales of champagne have declined worldwide as gastronomy is essential for sales. However, vintage champagnes in the fine wine market are not included in this downturn. At the moment, they are undervalued compared to the other famous wines, but demand is increasing due to attractive prices that still offer upside potential. For example, in a very interesting report "Champagne – a market without bubbles," the trading platform Liv-ex lists the average price for twelve bottles of first-class champagne at GBP 1,485, with the highest-quality Bordeaux at GBP 12,201, and Burgundy is even at GBP 15,039. As recently as 35 years ago, the prices of these three categories were relatively close together. In the meantime, however, collectors are discovering the appeal of mature high-quality vintage champagnes – a phenomenon that, until now, has only been prevalent in the UK. Some first-rate marketing (e.g. at Dom Pérignon), a worldwide sales network and the high level of brand awareness (even among laymen) is also having a positive effect. "Dom Pérignon" is the undisputed market leader, despite the company producing a huge estimated ten million bottles per year – production of Louis Roederer "Cristal" is much lower at probably around 700,000 bottles. The tiny Champagne house of Salon has also posted an above-average performance in recent years. Investors should keep an eye on the best "grower" champagnes (e.g. Agrapart, Egly-Ouriet), which are steadily increasing in popularity.

Most important brands: Moët & Chandon "Dom Pérignon," Louis Roederer "Cristal," Krug, Bollinger "Grande Année" and "R.D.," Pol Roger "Sir Winston Churchill," Salon, and Taittinger "Comtes de Champagne."

Top recent vintages: 2012, 2008, 2004, and 2002.

The Rhône

Thanks to Robert Parker, the Rhône has become one of the world's most prestigious wine regions. The wines mostly have a good storage life (some modern vinified Châteauneuf wines mature faster) and represent solid value in an international context. There are also particularly good white wines – but collectors should focus on the red wines of the northern Rhône with small production wines from Côte-Rôtie and Hermitage. With a few exceptions, such as Rayas or Bonneau, southern Rhône wines (e.g. Châteauneuf-du-Pape) have not performed very impressively. Rayas has the potential to become a cult wine while production has been stepped up considerably at Beaucastel.

Most important brands: Guigal, Jean-Louis Chave, Jaboulet Aîné, Chapoutier. Rayas, Henri Bonneau and Beaucastel "Homage Jacques Perrin."

Top recent vintages for northern Rhône: 2015, 2010, 2009, 2005, and 2003.

Top recent vintages for southern Rhône: 2016, 2010, 2007, and 2005.

Tuscany

Italian wines are increasingly growing in demand, especially those from Tuscany. The region can be compared to some extent with Bordeaux because the concept is often similar to Bordeaux wine chateaux with Bordeaux grape varieties (particularly in Bolgheri). The entry prices are relatively low but, compared to Bordeaux, the wines (with some exceptions) do not last nearly as long. Sassicaia has the dominant position, while Masseto is a small-production cult wine. Biondi-Santi wines come in very different qualities (although the standard should become more stable under the new owner). Production at Sassicaia and Tignanello is quite high at 400,000 bottles per year respectively, more than any top Bordeaux Chateau. Investors should aim to buy younger vintages to leave some room for manoeuvre.

Most important brands: Sassicaia, Masseto, Ornellaia, Tignanello, Brunello di Montalcino Case Basse, Biondi-Santi, Solaia, Fontodi Flaccianello, Pergole Torte, Le Macchiole Messorio, and Tua Rita Redigaffi.

Top recent vintages: 2016, 2015, 2013, 2010, and 2006.

Piedmont

If Tuscany is more like Bordeaux in concept, Piedmont resembles Burgundy. The dominant grape variety among the most expensive wines is Nebbiolo and the quantities produced are often very small (between 5,000 and 10,000 bottles). Like the wines from Tuscany, the most famous wines from Piedmont – especially Barolo and Barbaresco – have been in great demand for years, and the price hikes are sometimes enormous. Hence, collectors who buy directly from producers are likely to generate some excellent returns. Contrary to popular belief, the newer vintages of Barolo and Barbaresco do not always age well, so that investors need to be careful when choosing and should probably buy young wines to avoid emergency sales. The price level is already high and the producers still have well-stocked inventories.

Most important brands: Bruno Giacosa, Gaja, Giacomo Conterno, Sandrone, Aldo Conterno, Vietti, Bartolo Mascarello, Giuseppe Rinaldi, and Roberto Voerzio.

Top recent vintages: 2016, 2013, 2010, and 2004.

California

The upward trend in prices for the most sought-after Napa Valley wines over the last 20 years is simply astounding, helped along by some brilliant marketing. Some wines are already so high in price (e.g. Screaming Eagle) that further increases seem unlikely. Moreover, not all wines mature in the same way, with some examples of prominent names ageing prematurely. Heitz has been underestimated for years and, unlike some of its more acclaimed competitors, can be stored over a longer period of time.

Most important brands: Screaming Eagle, Harlan, Colgin, Dominus, Opus One, Heitz Martha's Vineyard, Ridge Monte Bello, Abreu, Phelps Insignia, and Shafer Hillside Select.

Top recent vintages: 2016, 2015, 2013, 2012, 2010, and 2007.

Countries and regions currently not in demand

Fine, hand-crafted sweet white wines offer some of the best value wines in the world, but do not make great investments. With the exception of Egon Müller, German Beerenauslese (late harvest wines made from individually selected grapes), investing in sweet wines of any kind, such as Sauternes, is rarely worthwhile, although the prices are attractive and they can age beautifully.

Red wines from Spain, such as Vega Sicilia and Pingus, and Australia, notably Penfold's "Grange" and Henschke "Hill of Grace" are also not particularly profitable for investors, although a variety of such outstanding wines are being produced in these countries. The enthusiasm for investing in these wines has been dampened by prices rising too much and too quickly. South America and South Africa have also generated limited interest to date. In contrast, investors would do well to keep an eye on how German wines like Riesling and Pinot Noir are developing (e.g. Keller G-Max), not least because the concept is very similar to that of Burgundy and the available quantities are small.

Anyway, remember the old adage that "if your investment doesn't work, you can always drink it."



Philipp Schwander MW has been in the wine trade for more than 30 years. His first professional experience with fine wine was tasting Bordeaux "en primeur" from barrel in 1982. Fourteen years later, while working as the head buyer for the fine wine importer Martel, he passed the world's strictest wine exam to become Switzerland's first Master of Wine. After ten years at Martel he was made CEO of the Zurich-based company Reichmuth, which at this time was one of the largest importers of Cru Classé Bordeaux in the country. In 2003, he founded Selection Schwander and his company is now one of the major wine merchants in Switzerland. He is an honorary member of the Austrian Wine Academy and writes regularly for the Neue Zürcher Zeitung and other publications on the subject of wine.



Graff Diamonds "Hallucination" – USD 55 million quartz watch; photo: Sebastien Bozon

Jewelry and watches: Luxury treasures

The history of jewelry is long and dates back to Neanderthals living in Europe. Throughout the ages and across all cultures, humans have used jewelry to denote status. Today, jewelry – including rare watches/time-pieces – has become a widely held collectible category.¹

Collectible jewelry

Adriano Picinati di Torcello

Collectible jewelry is mainly categorized as either “antique,” “vintage,” “vintage style” or “antique style” jewelry.

Antique jewelry, as defined by the United States Customs Service, refers to pieces that are at least 100 years old. However, many jewelry dealers and collectors stretch the term to include the 1920s and 1930s. This term applies to both fine and costume jewelry pieces, with the latter defined as jewelry made from non-precious materials. Broadly speaking, there are six eras of antique jewelry from the 1700s to the 1950s:

- Georgian: 1714–1837 (late Georgian 1760–1837)
- Victorian: 1837–1890
- Art Nouveau: 1890–1915
- Edwardian: 1901–1915
- Art Deco: 1920–1935
- Retro: 1935–1950

Vintage jewelry is at least 20 years old, has been previously owned and dates from 1931 onward. With a few exceptions, all pieces were produced from 1920 to 1960. The vintage category in jewelry is vast and varied, ranging from

old plastics like celluloid to coveted couture pieces. The quality and value vary from low-end to high-end. A desirable Christian Dior rhinestone brooch with simulated jade cabochons would be classified as vintage as it dates back to the 1960s.

Vintage style or antique style jewelry is jewelry made in the past 20 years in the style of original antique or vintage jewelry pieces that are still considered to be very collectible. Some of them, like a bracelet by contemporary designer Rodrigo Otazu, are influenced by vintage costume jewelry styles. What distinguishes contemporary collectible jewelry from mass-marketed imports is the fact that collectors are adding these to jewelry collections along with their older pieces. Contemporary collectibles are also usually sold in high-end stores or boutiques or marketed by notable artisans.

1. The following article is based on information gathered in an interview with Gary Schuler, worldwide chairman of jewelry at Sotheby's and Sam Hines, worldwide head of Sotheby's Watch Division.



The Hope Diamond; photo: The Washington Post

Regardless of whether it is antique, vintage or otherwise, “estate jewelry” is jewelry that has been previously owned even if never worn. It can apply to anything from a 1789 ring owned by George III to a sterling silver Elsa Peretti bracelet bought from Tiffany & Co. six months ago when sold as part of an estate liquidation.

Period jewelry is a term for fine jewelry made within the last 100 years and is most often used to describe “important” pieces from the Art Deco or Retro eras. For instance, pieces made by Cartier in the 1920s and 1930s could be referenced as period jewelry. The Cartier “Tutti Frutti” bracelet made in 1928 is from the collection of Evelyn Lauder and it broke a world record, selling for USD 2.1 million in 2014.

Condition, time period and type

The value of antique jewelry is largely dependent on three factors: condition, time period, and type of jewelry:

1. Condition – while the age of jewelry may increase its value due to scarcity and demand, the reality is that its condition may have deteriorated depending on how it has been cared for. The better the condition, the higher the resale price of jewelry.

2. Time period – today, Art Deco is one of the strongest and most profitable collectible segments of the jewelry market, while the Victorian period is less in demand. However, extremely rare jewelry with a strong provenance tends to fetch the highest prices. Collectors have always been interested in rare designs and emblematic signed pieces from prestigious jewelry houses, as exemplified by the Art Deco period. People remain fascinated by the craftsmanship and the “soul” of these pieces, which they see as works of art.

3. Type of jewelry – it is important to consider the type of jewelry. Today, for example, rings, bracelets, necklaces and earrings are the most sought-after items, while pendants, brooches and cufflinks are to some extent less interesting and tend to sell at a discount. Nevertheless, whatever the type of jewelry, collectors have always had an interest in rare unique pieces displaying exceptional materials and craftsmanship, and which are emblematic of a period. Design is another important element to consider: exceptional pieces that feature rare and iconic examples of the artist’s creativity will always be in demand. Jewelry representing a particular historical period telling a special story about who once owned it (e.g. from noble and celebrity origin to prominent philanthropic families) is also very popular. One case is Marie Antoinette’s pearl pendant, which encapsulated everything a collector is looking for: a wonder of nature combined with exceptional provenance, history and craftsmanship.

Top 10 most expensive pieces of jewelry ever made

1. The Hope Diamond (probably inestimable²): Perhaps the most famous jewel in the world is a 45.52 carat blue stone thought to have come from the Golkonda mines in Southern India in the 17th century and is on display at the Smithsonian Institution in the USA.

2. The Peacock Brooch (USD 100 million): Made by Graff Diamonds in 2013 and shaped like a peacock with fanned feathers, the brooch contains a total of 120.81 carats and over 1,300 stones in white, yellow, blue, and orange diamonds. A very rare dark blue 20.02 carat pear-shaped diamond sits at the center.

3. The CTF Pink Star (sold by Sotheby's for USD 71.2 million – a world record for any jewel sold at auction). Cut from a 132.5 carat rough diamond mined in South Africa in 1999, the CTF Pink Star is a 59.60 carat oval “fancy vivid pink internally flawless”³ diamond mounted in a ring.

4. The Oppenheimer Blue (USD 57.5 million): Likely mined in the early 20th century, the Oppenheimer Blue is a vivid blue diamond cut into a rectangle (emerald cut) weighing 14.62 carats.

5. The “Apollo & Artemis” diamonds, renamed “The Memory of Autumn leaves” and “The Dream of Autumn Leaves” after their sale for USD 57.4 million at Sotheby's in 2017. These earrings are made up of a 14.54 carat fancy vivid blue diamond and a 16 carat fancy intense pink diamond and set a world auction record for a pair of earrings.

6. L'Incomparable Diamond Necklace (USD 55 million): With the largest-known internally flawless yellow diamond about the size of an egg at its center, L'Incomparable is made up of 407.48 carats of diamonds set on a bed of 18 carat gold.

7. The Blue Moon of Josephine (sold by Sotheby's for USD 48.4 million in 2015 – the world auction price-per-carat record for a diamond or gemstone (over USD 4 million per carat ⁴). Discovered in South Africa in 2014, this cushion-shaped diamond is a rare 12.03 carat fancy vivid crystal blue stone.

8. The Pink Emerald-Cut Graff Diamond (USD 46 million): Unearthed in Lesotho, the Graff Pink is a rare 24.78 carat pink diamond with an emerald cut set in a ring.

9. The Queen Marie Antoinette's Pearl (sold by Sotheby's for USD 36.2 million in 2018): Setting a world-record price for a natural pearl, this diamond-and-pearl pendant once belonged to the ill-fated Queen of France, Marie Antoinette.

10. The Orange (USD 36 million): This orange pear-shaped diamond weighing approximately 14.82 carats, is the largest fancy vivid orange diamond in the world.

2. The Hope diamond has not come on the market for centuries, but, as it is so famous, we have included it in this list.

3. Graded by the Gemological Institute of America in terms of color grade and color intensity.

The key factors that always attract the attention of experienced collectors are quality and rarity. Whether it is an exceptionally rare diamond, a particularly fine example of a gemstone with an outstanding color, or an iconic piece of signed jewelry that exemplifies the design and artisanship of a celebrated house such as Cartier or Van Cleef & Arpels, the appeal of quality and rarity will always endure.

The collectible jewelry market

The auction world of collectible jewelry is valued at well over USD 1 billion per annum and has grown dramatically over the last ten years at roughly 10% per annum. The overall size of the collectible jewelry market is probably well over USD 10 billion per annum balanced equally between Europe, the USA and Asia, with Hong Kong SAR experiencing the largest surge in growth. However, we are also seeing growth in the Middle East, Latin America and the rest of the world.



Quality and rarity will always endure

Exceptional diamonds and high-quality colored gemstones (especially the “big three heritage stones” – rubies, sapphires and emeralds from the celebrated historic mines in Burma, Kashmir and Colombia) are highly sought-after and realize the highest prices. Iconic vintage designs that are emblematic of a golden era have also become highly prized collectibles around the world.

Branded jewelry from Cartier, Van Cleef & Arpels, Tiffany & Co., Bulgari, Harry Winston, JAR, Graff, David Webb, Verdura, Boucheron, Chaumet, Suzanne Belperron, Boivin and Alexandre Reza, among others, is most sought after because it provides confidence and continues to perform very well.

The most important developments

The digital revolution has brought about a huge transformation in the auction world and continues to do so, especially with online bidding and social media. This ties in with the rapid growth in proficiency among a wide base of collectors who are more knowledgeable than ever – from diamond gradings, the origin of precious gemstones or the history and craftsmanship of famous houses. Thanks to the internet, there is a wealth of information out there about jewelry. Another development is that many younger buyers are looking to auctions as a sustainable way to own fine jewels and unique pieces as alternatives to mainstream retail jewelry.

This dynamic environment and global audience have led to unprecedented auction results for famous diamonds and gemstones, starting the decade with the sensational Graff Pink and the reappearance of the Duchess of Windsor's jewels in 2010, and culminating with the world record for the CTF Pink Star and breath-taking jewels from the personal collection of Queen Marie-Antoinette. Since 2010, Sotheby's jewelry sales have totaled in excess of USD 4.8 billion. The average value of lots sold between 2010 and 2019 was USD 116,500 (40,353 lots totaling USD 4.8 billion). Over this period, Sotheby's sold 683 lots above USD 1 million (41 above USD 10 million).



Unprecedented times are often a catalyst for change

The rare diamond market

In the last ten years, we have experienced a number of record-breaking colored diamond sales, a testament to the extraordinary growth of that sector. White diamonds have also seen sustained demand, with many selling above the presale estimates in recent years, such as a spectacular D-Color Flawless stone over 88 carats which sold at Sotheby's Hong Kong last year for close to USD 14 million. Colored gemstones such as Kashmir sapphires, unheated Burma rubies and Colombian emeralds are top of the line and this is evident when the finest examples are offered at auction.

As more and more people become aware of the extraordinary rarity of colored diamonds and those that fall into the Type IIa⁴, we should continue to see strong demand for the finest examples of such stones. Now there is a greater understanding of the importance of geographic origin for gemstones and the factors which determine their value. Developments such as the closure of Australia's Argyle mine – the most reliable source in the world for pink and red diamonds – by the end of this year, has served as a reminder of just how rare they are.

Jewelry collectors

Historically, collectors have mainly been men, but today there is a good mix of women and men who collect. Recently, young and established collectors have shown a growing interest in jewels with a royal connection and steeped in European history. The audience for auctions is ever-expanding and fully globalized, with participants from over 100 countries. Collectors are beginning to understand what is really rare, thereby increasing their desire to find these items.

Collectors like the portability of jewels and that they hold their value without depreciating even if they are not the most liquid of assets. They also very much like to wear beautiful and exceptional jewels. One can start collecting jewels at a level of around USD 5,000–10,000. According to David Bennett, Worldwide Chairman of Sotheby's Jewellery, "The idea of having a piece no one else possesses has become the core motivation for antique jewelry collectors."

New collectors are recommended to seek out advice prior an acquisition, make sure they have all the documentation, including gemstone laboratory reports, and to carefully store them.

Impact of the COVID-19 crisis

According to Sotheby's, demand remained robust for high-quality jewelry at the 19 jewelry sales held since January in New York, Hong Kong SAR, London, Geneva, Paris and Milan. The firm had been investing in and growing the digital side of its business for a number of years, allowing it to adapt more easily to the COVID-19 crisis, with a mix of online and live auctions and varying audiences. This is reflected in their sales since March: 26% of new buyers were via online sales and 20% of bidders were under 40.

4. Type IIb diamonds make up about 0.1% of all natural diamonds, making them one of the rarest natural diamonds and very valuable. Diamonds are separated into five types: Type Ia, Type Ib, Type IaB, Type IIa, and Type IIb.

Unprecedented times are often a catalyst for change, crystallizing pre-existing trends and accelerating innovation. As some of the oldest and rarest objects on earth, exceptional diamonds and gemstones have traditionally been considered a safe haven. While this year has shown that there will always be unknown factors that may affect the market, sales in recent months have confirmed the resilience and the enduring appeal of collectible jewelry.⁵

5. Sources used for this section include: (<https://www.dictionary.com/browse/jewel>) (<https://www.thesprucecrafts.com/classifying-antique-vintage-collectible-jewelry-3993636>); (<https://www.wpdiamonds.com/much-antique-jewelry-worth/>); (<https://friedmans.com/worlds-most-expensive-jewelry/>) (<https://luxatic.com/top-15-most-expensive-pieces-of-jewelry-ever-made/>)

Collectible watches and timepieces

Karine Szegedi, Jules Boudrand

In 1505, German locksmith and clockmaker, Peter Henlein, is said to have invented the world's first watch, the Watch 1505, a fire-gilded pomander.⁶ The earliest known "arm watch" encrusted with jewels was given to Queen Elizabeth I of England already in 1571. The oldest still-functioning pocket watch is the spherical Melanchthon Watch from 1530 made in Germany. The oldest watch company in the world still in operation is Gallet & Co, a Swiss watchmaker founded in 1466. Abraham Breguet invented and produced the world's first self-winding watch (the Perpétuelle) in 1780.

The earliest of Breguet self-winding watches to have survived, the Breguet Perpétuelle repeating watch no. 1. 8/82, was completed in 1782, with an oscillating platinum weight rewinding the watch automatically. On 26 June 1801, Breguet patented the "tourbillon regulator," a revolutionary mechanism that neutralized the effects of gravity to provide incredible precision in mechanical timepieces. As well, he developed the world's first wristwatch, the Breguet No.2639, which was ordered by Caroline Murat, Napoléon Bonaparte's younger sister, the Queen of Naples. Completed in 1812, unfortunately it has since been lost.

6. https://en.wikipedia.org/wiki/Peter_Henlein

As with jewelry, the quality of materials used, the brand, craftsmanship, provenance and limited-edition models continue to define the rarity and value of each timepiece. Swiss watchmakers established themselves early on as masters in the field and even today the Swiss watch industry is a clear leader in the worldwide luxury watch market. An estimated 95% of all watches currently retailing over CHF 10,000 are produced in Switzerland.

There are five key differences between regular watches and timepieces:⁷

1. The movement: Watches typically have a battery (quartz movement), whereas timepieces have either mechanical or automatic winding movements composed of numerous wheels, springs, gears and tiny components. Even in the most simplistic mechanical watches, more than 130 parts can be found.

2. Chronometer certification: Timepieces are chronometers. A chronometer is an instrument for measuring time, especially accurate time in spite of motion or variations in temperature, humidity and air pressure.

Many luxury brands have their chronometers certified by one of the official time-keeping bodies to prove just how well they keep time. In Switzerland, each chronometer is unique, identified by a number engraved on its movement and a certificate number issued by the COSC, The Contrôle Officiel Suisse des Chronomètres, the Official Swiss Chronometer Testing Institute, is the institute responsible for certifying the accuracy and precision of Swiss watches.

3. Quality of craftsmanship: Timepieces will typically have expensive high-quality materials like gold, high-grade steel, platinum, diamonds, carbon fiber and rubies. Not only are the materials used in timepieces of a higher quality, but the attention to detail in the craftsmanship is much higher.

4. Complications and functionality: A complication is a specific function that a timepiece has beyond keeping time. For example, a chronograph, a moon-phase, calendar, date window, and a tourbillon are all types of complications. There is a wide array of complications in various timepieces that add to their value and use.

5. Appreciation: There are two different types of appreciation with regard to timepieces – one is enjoyment and the other is financial. Timepieces can hold their value well and in some cases even appreciate in value over time.

7. <https://www.watchtradingacademy.com/advice/differences-between-watches-and-timepieces>



The Patek Philippe Henry Graves Supercomplication
Photo: Fabrice Coffrini



The collectible watch market sold through auctions has grown tenfold over the past two decades

The collectible watch market

The collectible watch market sold through auctions has grown tenfold over the past two decades. In 2018, the Foundation High Horology Watchmaking Trends Report 2018 estimated the second-hand watch market to be worth an estimated USD 5 billion in revenue and that it increases in value by 5% per year. The success of the market is due to the rise of the internet, e-Commerce platforms and new consumption habits in the form of online shopping. Once left to specialized online platforms and third-party dealers, a growing number of brands are signaling an interest in regaining control over this market. Sotheby's has found that crises tend

to increase people's passion for collectibles, which was well illustrated by the 2008 financial crisis. After a sharp drop in 2009, the industry experienced strong growth in the following years, mainly led by growing demand from Asia (China and Hong Kong SAR).

Faced with economic uncertainty and volatile stock markets, people tend to invest in tangible assets such as precious metals, jewelry and timepieces to diversify their portfolios. Vintage watches can be a safe investment and those that are particularly rare can enhance a collector's investment portfolio providing diversification and store of value.

The Patek Philippe Perpetual Calendar Chronograph in pink gold (Ref. 2499) sold by Sotheby's in 2018 for almost USD 3 million is a good case in point. This watch was first sold at auction in 2005 for USD 500,000 and then for USD 1 million in 2010. The price increased once it became clear that the watch was one of only six produced. The Henry Graves Supercomplication mechanical pocket watch, produced in 1933, originally sold for USD 11 million in 1999 and later sold in 2014 for USD 24 million, generating a cumulative value increase of 218% over 15 years, i.e. 14.5% annually. It is still the world's most complicated watch and still holds the record price for a pocket watch.

Top 15 most expensive watches in 2020

1. Graff Diamonds “Hallucination” – USD 55 million quartz watch.
2. Graff Diamonds “The Fascination” – USD 40 million diamond convertible watch.
3. The Patek Philippe Grandmaster Chime Ref. 6300A sold for a hammer price of USD 31 million at the Only Watch charity auction held by Christie’s in 2019.
4. Breguet’s Grande Complication Marie-Antoinette pocket watch number 1160 crafted in 1827 – USD 30 million (this is an estimate as the watch has not come on the market for a century).
5. The Jaeger-LeCoultre Joaillerie 101 Manchette watch presented to Her Majesty Queen Elizabeth II to mark the 60th anniversary of her reign – USD 26 million (this is an estimate as the watch never came on the market).
6. The Chopard 201-Carat Watch made in 2000 with 874 high-grade diamonds of different colors and sizes – USD 25 million.
7. The Patek Philippe Henry Graves Supercomplication was sold at a Sotheby’s auction in 2014 for USD 24 million.
8. The Jacob & Co. Billionaire Diamond Tourbillon Watch made in 2015 for Flavio Briatore – USD 18 million.
9. The Paul Newman Rolex Daytona watch sold at a Phillips auction in 2017 for USD 17.6 million.
10. The Patek Philippe Ref. 1518 stainless steel perpetual calendar with chronograph sold at Phillips in 2016 for USD 11 million.
11. The Vacheron Constantin 57260 pocket watch is the most complicated watch ever made, featuring 57 complications and created in 2015 to mark Vacheron Constantin’s 260th anniversary – USD 10 million.
12. Created in 1947, the Patek Philippe Ref. 1527 watch was auctioned in 2010 by Christie’s for USD 5.7 million (the price realized was CHF 6,259,000, with an estimate of CHF 1,500,000–2,500,000).
13. The Hublot Big Bang Diamond – USD 5 million.
14. The Louis Moinet “Meteoris” contains a fragment of a meteorite – USD 4.6 million.
15. The Breguet Antique Number 2667 was auctioned by Christie’s in 2012 for USD 4.5 million (the price realized was CHF 4,339,000, with an estimate CHF 800,000–1,400,000).

In the past, it has been difficult to prove the rarity of a timepiece, but this is much easier nowadays. The serial number tells what year the timepiece was manufactured. Manufacture dates indicate the rarity of a timepiece, which is the biggest driver of the massive premiums collectors are prepared to pay. Vintage timepieces that are out of production or inherently limited can be a good investment, although collectors ultimately tend to be motivated by fascination and passion when they acquire a rare, hard-to-find timepiece to either display or admire as part of a lucrative collection. However, counterfeiting remains a big issue. According to the Federation of the Swiss Watch Industry, fake watches account for 9% of customs seizures, placing watches second only to textiles as the most counterfeited products. One of the reasons is the internet, as technology makes it easier to buy and sell counterfeit items online.



The pre-owned market also has considerable growth prospects

The market for collectible watches sold through auctions is dominated today by a small group of auction houses, including Sotheby’s, Christie’s and Phillips, representing approximately USD 350 million in sales per year. In the first half year of 2020, Sotheby’s achieved over USD 44 million in global auction sales. A selection of blue-chip brands favored by collectors benefit from these types of sales: Patek Philippe, Rolex and Audemars Piguet are at the forefront, followed by other brands like Vacheron Constantin, Zenith or Longines, and smaller independent brands such as Philippe Dufour, F.P. Journe or MB&F, which have been growing in popularity with collectors.

Watch auctions are a serious business and generate serious cash. The most expensive watch ever sold at auction was a steel Patek Philippe Grandmaster Chime (Ref. 6300A-010), which sold for USD 31 million at Christie’s Geneva in 2019. This unique stainless steel watch was introduced in 2014 to mark Patek’s 175th anniversary and is the most complicated model the company has ever produced. The Grandmaster Chime is reversible, with two dials and

has 20 different functions including a perpetual calendar, a second time zone and esoteric chiming mechanisms known as grand and petite sonneries. It includes 1,366 movement components, gold Breguet numerals and has a hand-stitched alligator leather strap.

The pre-owned market also has considerable growth prospects, thus leading some Swiss watch brands to start or announce the launch of their own certified pre-owned offering (MB&F, F.P. Journe or Audemars Piguet). Large brands and groups are also looking to gain a share of this market to counter the cyclical effects of their business and potentially grow sales of new watches via trade-in programs. Richemont Group's acquisition of online pre-owned reseller Watchfinder in 2018 is evidence in support of the expectations for the pre-owned market.

Pivoting due to COVID-19

Online watch auctions have existed since around 2010, but sales for collectibles were still limited. They have since grown in popularity and have clearly been accelerated by the COVID-19 crisis, which forced auction houses to rethink their business models.



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As of April this year, Sotheby's Watch Division launched a new sales initiative called "Watches Weekly." This series of weekly online auctions complements its existing sales calendar and unveils a new selection of watches every seven days in New York, Hong Kong SAR and Geneva. Between April and July this year, there have been over 35 online sales conducted across Hong Kong SAR, New York, Geneva and London with sales of approximately USD 28 million.

Before COVID-19, it took four to five months for a watch to be brought to auction between the consignment, appraisal, photographing and printing of catalogs. A watch can now be ready for a live auction in less than five days. This online format is decidedly more dynamic, allowing vintage watches to be more liquid assets for collectors with more opportunities to sell their products. Watches ranging from USD 200,000 to USD 400,000 are selling more easily, if not better than before.



Owing to the COVID-19 pandemic, online auctions have become mainstream

One of Sotheby's first watches for sale on 1 April 2020 was a stainless-steel Rolex Paul Newman Daytona (Ref. 6241) made in the late 1960s that sold for USD 306,518. This highest price paid for a watch at an online auction has since been surpassed by the Dent pocket watch, which sold for CHF 800,000 in June 2020.

On 13 July 2020, Sotheby's Hong Kong sold a Rolex Platinum Zenith Daytona with a hardstone lapis lazuli dial for USD 3.3 million, which was six times higher than the estimate and a record for an automatic Rolex Daytona. During a live auction on 14 July 2020, Sotheby's set another record for a Breguet Tourbillon that was made for King George III in 1808 and sold for GBP 1,575,000. Only 20 live clients were allowed in the room and most of the bidding was either by phone or online.

This weekly sales format allows auction houses and sellers of collectible watches to be more responsive to changing consumer trends and reach new buyers. According to Sotheby's, 40%–50% of buyers accessing their weekly sales platform were new customers and four in ten were under 40 years old.

Owing to the COVID-19 pandemic, online auctions have become mainstream, which will undoubtedly boost collectors' confidence when buying and selling big-ticket watches online. Giving auction houses the ability to connect with their collectors' networks more frequently is helping to reshape business models – forcing not just auction houses, but the industry as a whole to embrace digital channels as people travel less and spend more time at home.

The future is digital

Going forward, Sotheby's anticipates that live in-person auctions, which used to display 500–600 watches, to continue mainly for exceptional timepieces in very exclusive and a reduced number of events.



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The vast majority of top buyers now come from Asia, a number of whom are under the age of 30 and are particularly active in the superstar watches category (in the range of USD 3–4 million). For the other price categories, Asia remains the primary region, with a growing interest from millennials followed by the USA, EU and the Middle East. The shift to digital and online auction formats, accelerated by COVID-19, comes at a time of increased interest from millennials and Generation Z. These digital natives are active online, have no issues with e-commerce and are ubiquitous social media users, especially when displaying their watch collections.



The outlook for collectible watches is expected to remain very strong

Although COVID-19 has greatly affected the market for new watches this year, the market for vintage watches is proving resilient albeit with the help of a modern format. The outlook for collectible watches is expected to remain very strong, driven by a growing demand for vintage watches and the desire of new generations to own top vintage Rolex and Patek Philippe watches. Sotheby's experts expect this trend to increase season after season.⁸

8. Sources used for this section include: <https://www.cosc.swiss/en>; <https://whichwatch.org/the-worlds-oldest-watch-that-still-works/>; <https://www.watchtradingacademy.com/advice/differences-between-watches-and-timepieces>).



Photograph of Maestro Leonidas Kavakos playing on the 'Willemotte' Stradivari, Cremona 1734
by Marco Borggreve, courtesy of Intermusica

Special focus: Musical instruments and luxury handbags

Collector music instruments and luxury handbags are both niche markets, when considering the size of their annual sales compared to those of other collectibles. But they each command special interest. Rare musical instruments are a delight for artists and music lovers and require very special knowledge. Luxury bags are an emerging collectible category that has shown a very rapid transformation into a mature market and is therefore worth a particular focus.

Musical instruments: Masters of sound

Florian Leonhard

History and rarity

Much like the artistic masterpieces by Caravaggio and Gentileschi, fine violins from the Renaissance and Baroque Italian pioneers and other rare string instruments like violoncellos or violas by renowned master craftsmen have shown remarkable appreciation in value over time and continue to rise in value. The unrivaled quality, sound and aesthetic beauty of instruments such as the well-known Stradivari violin, as well as their rarity, are the envy of any aspiring professional violinist and oftentimes are the focus and draw for audiences around the world. Fine musical instruments therefore also make for a tantalizing, unique and risk-averse investment opportunity with serious interest in these instruments dating as far back as the 19th century.

Since, among rare musical instruments, fine violins represent the most important category and also fetch the most impressive prices, we focus

on them in this article. However, depending on their history and rarity, many other kinds of instruments find their way into the hands of musical instrument collectors.

The fine violins universe

The finest examples of Italian instruments – such as those of Amati, Guarneri and Stradivari – retain extraordinary characteristics that cannot be matched even in this day and age. These makers were the rare few who dedicated their lives to mastering their craft during the Age of Enlightenment, a time of great artistic discovery. Tragically, most of the secrets of their uncanny craftsmanship were lost to the ages when they died. The scarcity of these fine Italian violins is a key reason for their ever-increasing value along with the incredible history behind them.



Sheku Kanneh-Mason playing Amati cello using a Maire bow; courtesy Florian Leonhard Fine Violins

“

There are around three thousand string instruments globally worth GBP 1 million and over

Although prices can fluctuate and vary, fine Italian instruments such as prestige violins typically sell for around GBP 1 million at present. Their value not only reflects their scarcity and historical value, but also the fact that such premium violins seldom come up for sale. According to specialists, there are around three thousand string instruments globally worth GBP 1 million and over. While there may be, say, 650 instru-

ments built by the most sought-after makers like Stradivari “in known existence,” as few as a half dozen might come on the market at any one time.

That said, many string instruments from other notable makers such as Amati, Rugeri and Gagliano tend to be more numerous in world auctions, ranging among the hundreds. While these instruments typically sell for less (in the hundreds of thousands), they can continue rising in value and create “new potential” in the less-developed segment of the fine violins investment market.

The benefits of patronage

Patronage plays a vital and often symbiotic role in the world of classical music. Young virtuoso violinists, in particular, find that their talents must be showcased on the finest instruments in order to progress into the stratospheric realms of performance. Violins suitable for their caliber are frequently out of reach financially for young musicians. Therefore, owners of such instru-

ments sponsor the musician of their choice to perform with their instrument. The benefits of this can be wide-ranging. Patrons gain from associating their instruments with top artists and the publicity they receive can add further to the provenance and value of the instrument. Meanwhile, their instruments are being used and cared for to the fullest extent by grateful musicians who also often pay for maintenance and insurance. Examples of virtuosos who have benefited from patronage include Nigel Kennedy, Steven Isserlis, Maxim Vengerov, Lisa Batiashvili, Renaud Capuçon, Frank Peter Zimmerman, Nicola Benedetti and Sheku Kanneh-Mason, all of whom have gone on to become some of the world's most sought-after soloists.

“ Patronage plays a vital and often symbiotic role in the world of classical music

Asia: A rising force for the fine violins market

Asia has been a rising force on the world wealth stage in the past few decades and its influence has equally extended to western art music. Asia has been particularly instrumental in the revival of the classical music genre, with a rising demand for classical concerts, showcasing young virtuoso Asian musicians rivaling even the most experienced musicians in Europe and North America. As a result of the demand from Asian musicians, collectors, patrons and institutions such as leading Asian orchestras, collector instruments have seen continuous increases in value. Much like what encouraged wealthy individuals in 19th century salons to differentiate from their peers by playing rare string instruments to illustrate their cultured tastes and values, today's collectors in China and other Asian countries purchase historically significant violins as a mark of their individuality and artistic pursuits. China and South Korea have been particularly strong growth markets for fine violins alongside the more mature Japanese market.

Asset qualities of fine violins

Despite the absence of extensive data and figures, past sales are showing resilient returns on investment for fine instruments over time. A selection of Stradivari, Guarneri del Gesù, Bergonzi and Guadagnini violins have shown a steady year-on-year average increase of 12%–15% in value. With minimal fluctuations in the market, prices are expected to continue rising.

The supply of these rare old instruments remains finite, while demand is continually increasing, especially in Asia. We have already seen major sales of tier-one instruments in China over the last five years, with Chinese orchestras increasingly acquiring higher-quality instruments. As prices increase for tier-one instruments, we are experiencing even more appreciation in second- and third-tier instruments from clients who are priced out of the tier-one market. The modern Italian makers (after 1900) are now becoming a collectible class, particularly in the Far East, and we are seeing similarly high increases in value for these instruments. Remarkably, throughout the recent global crisis, prices have remained as stable as ever, supported by growing global demand and an increasing number of middle-class Western-educated patrons of music around the world.



Florian Leonhard is a London-based violin maker, dealer, restorer and expert who has dedicated his life to studying, restoring and making violins. After studying in at Mittenwald School of Violin Making, he worked for W.E. Hill and Sons becoming Head Restorer. His firm, Florian Leonhard Fine Violins, has restored and supplied instruments by Stradivarius and the Guarnerius family for a number of renowned players including Leonidas Kavakos, Daniel Hope, Julian Lloyd Webber and Alina Ibragimova. Florian has appeared on BBC, CNBC and in the Economist, on subjects relating to rare musical instruments. The Daily Telegraph has described him as “the world's leading expert on fine violins” and the Financial Times as “world-leading authority on fine violins.”

Luxury handbags : The fashion aristocrats

Nannette Hechler-Fayd'herbe

Quality, exclusivity and resilience

Over recent years, lifestyle collectibles and especially luxury handbags have been established as a quickly growing collectible category, with top auction house sales quadrupling between 2012 and 2019. Much like classic car collectors, handbag collectors appreciate the quality of the craftsmanship, the exclusivity of collectible bags and the resilience in value even through periods of crisis.

The luxury handbag market

The first handbag sale by Christie's dates back to 1978, when it sold a handbag that formed part of Coco Chanel's collection to the Smithsonian Institute in New York City. But it was not until 2005 that handbag auctions by Artcurial and Gros & Delettrez, two French auction houses, actually took off. The sale of a unique Hermès handbag made in 2007 in honor of Grace Kelly and presented to her daughter, Princess Stephanie of Monaco at an Artcurial auction in aid of charity for EUR 64,000 was a noteworthy event as it demonstrated the potential value of unique handbags.¹

The secondary market for handbags then received a boost from the 2008 financial crisis, which produced a surge in interest for quality vintage fashion. Christie's successful auction of the Elizabeth Taylor collection of handbags in 2011 eventually led to the set-up of Christie's luxury handbag department and the hosting of live and stand-alone handbag auctions from 2014 onward. Since then, the luxury handbag market has evolved from an emerging to a mature market.

With GBP 26.4 million (USD 34 million) of sales, the collectible handbag market is still relatively small compared to the other collectible categories, but growth has been rapid and there appears to be significant potential as the collector base is on the rise, with a growing female participation in the top wealth segments. According to Global Information, Inc. (GII), the luxury handbag market was valued at USD 58.3 billion in 2018 and is expected to reach USD 89.9 billion by 2026, posting a compound annual growth rate (CAGR) of 5.6% from 2019 to 2026.

1. This and following examples based on "The Luxury Handbag Report 2020," Art Market Research, www.artmarketresearch.com

Five leading auction houses dominate the collectible handbag market, as reported by Art Market Research (AMR). Christie's by far claims the biggest market share, with about 50% of sales, followed by Asian-based Poly Auction and Heritage both at close to 15% market share, and Sotheby's, Milan-based Finarte and French-based Artcurial with market shares between 3% and 7% each. Average customer spend in 2019 was highest at Poly Auction at GBP 19,000 followed by Christie's at GBP 12,000 and Sotheby's at close to GBP 9,000.

Brands and models are key for prices as is condition and the rarity of materials. Rare skins like crocodile, ostrich and lizard tend to fetch the highest prices and hold their value well as these are materials used less and less. Special origin or editions add to the value. For example, Elizabeth Taylor's Diamond and Gold evening bag sold for USD 218,500 or 37 times the upper estimate at auction in 2011. Limited edition Murakami Vuitton bags have been similarly popular with collectors interested in contemporary or decorative art.



The luxury handbag market has evolved from an emerging to a mature market

There is a wide diversity in the profiles of handbag collectors. Predominantly female, they are completely international and made up of all age groups. People who purchase vintage handbags include newcomers who celebrate an accomplishment with their first bag as much as seasoned collectors with fifty or more bags in their wardrobes. Whereas European and American collectors seem to favor larger-sized Hermès Birkins, Asians prefer Hermès Kelly and generally smaller-sized bags made from rare skins.



Photo: Edward Berthelot

Collectible handbag categories

While there are many different brands included in leading handbag auctions such as Hermès, Chanel, Louis Vuitton, Dior, Gucci, Fendi, Celine and more, three brands mainly dominate the collectible handbag market: Hermès, Chanel and Louis Vuitton.

Hermès

Hermès has always cultivated great exclusivity, starting with its long history of the highest-standing craftsmanship, association with elites in society and in sports (e.g. with its exclusive show-jumping sponsoring) and company-owned stores in which not all products are available and there are long waiting lists for new Hermès products. It is thus not surprising that Hermès also tops the collectible handbags universe with two models in particular: the Hermès Birkin and the Hermès Kelly, after their “godmothers” actress and singer, Jane Birkin, and actress and later Princess of Monaco, Grace Kelly. Hermès “Constance” bags are emerging as the model for the younger generation.

Birkins cannot be purchased directly off the shelf, but sell on waiting lists to a select group of Hermès-loyal customers. It is difficult to know the original retail price, but the cheapest Birkins sell for around USD 5,000. Most top-valued Hermès Birkins come in rare “Himalayan Crocodile” leather

with white gold and diamond or palladium hardware. For example, a “Himalaya Birkin” with 18-carat white gold and diamond hardware sold for a record auction price of USD 300,168 in 2016, eclipsing its initial auction estimate by almost double and remaining the most expensive handbag ever sold. The annual price increase between 2010 and 2020 for Hermès Birkin bags has typically been about 5.7% according to Art Market Research (AMR) data, with a compound annual growth rate of close to 8% when accounting for the sharp increase in value of Birkins since 2018. Only a few Birkins, like the gold and etoupe Birkins, have struggled to keep their value. Particularly noteworthy is the “So black” series, a series of Birkin bags designed by Jean Paul Gaultier when he was creative director at Hermès ten years ago. This edition was retired after only three seasons, which explains its rarity. It acquired cult status when a number of widely followed influencers were spotted with a “So Black” Birkin.

According to AMR, Hermès Kelly handbags have long been less pricey than Birkins, but have seen their value rise more over time and can today fetch similar values as Birkins. Practically all, even average, Hermès Kelly handbags have seen their value rise between 2010 and 2020. Typical annual returns are 6%, with a CAGR of 7.9% when accounting for the sharp increase in value since 2018. Particularly note-



Photo: Christian Vierig

worthy is the limited-edition “Osier Picnic Kelly” introduced in 2011. This is one of the rarest Kelly series – along with the “Kelly Teddy” – and most highly priced at an average 2015–19 price tag of GBP 28,470 according to AMR.

Chanel

Chanel bags, especially Chanel's iconic “Flap Bag,” have long been “must-haves” for many handbag collectors. The annual increase in value for a Chanel bag is typically around 6%, with a CAGR of 8% when accounting for the sharp increase in value since 2018. Karl Lagerfeld's death has only amplified the trend in value creation for Chanel bags like the “Classic Flap” with its updated look and interlocking CC lock. Rare Chanel bags can be expected to perform strongly in the years ahead.

Examples of particularly noteworthy Chanel bags include the limited-edition “Métiers d'Art” clutches created by Karl Lagerfeld from 2002 onward in very small numbers at the company's small artisan workshops each season for the runway shows. Among the most highly prized Chanel bags, a 2010 “Métiers d'Art Paris-Shanghai Black Lucite Matryoshka Evening Bag” with gold hardware sold for GBP 24,670 in 2018.

Louis Vuitton

Louis Vuitton's “Monogram” handbags are popular luxury bags, with many models like the “Noé,” “Speedy” or “Alma” considered to be classics. Over the years, however, the models produced largely outnumber the other two collectible brands, thus resulting in lower prices and smaller increases in value compared to Hermès' or Chanel's top-selling collector bags. The average annual increase in value for Louis Vuitton Classics is in the low-single-digit range (1% annually) according to AMR. Noteworthy designs nevertheless include the “Neverfull” created in 2007 and the “Noé” in “Epi leather,” a grained leather used by Louis Vuitton in the 1920s.

On the other hand, Louis Vuitton stands out through its collaboration with artists. In particular, Japanese pop artist Takashi Murakami has worked with Louis Vuitton's creative director Marc Jacobs on a number of pieces that have become collectibles. One prominent example is the series of “Editioned Canvasses” such as the 100 “Monogramouflage” bags produced in 2008 and since resold at auction. Top-priced Monogramouflage bags sold for GBP 16,360 in 2010.

Christie's condition report grades

| Grade | Condition |
|-------|------------------------------------|
| 1 | As new |
| 2 | In excellent to pristine condition |
| 3 | In excellent condition |
| 4 | In very good condition |
| 5 | In good condition |
| 6 | In fair condition |

Source: Christie's

Key risks

The key risks associated with luxury bag collecting include the condition they are in, counterfeit bags and, in the very long run, changing fashions that could possibly lower the value of collector handbags. For example, some of the most fashionable vintage beaded and threaded bags from 100 years ago are selling for just USD 100 these days. Certainly, condition and authenticity are the most immediate risks that collectors need to assess and manage when purchasing pre-owned luxury bags.



Condition and authenticity are the most immediate risks that collectors need to assess

Specialized auction houses perform authenticity checks and issue authenticity warranties. They also determine the condition and provide condition reports. Christie's, for example, uses a six-grade system to assess the condition of the handbags it auctions. The best possible condition without any sign of wear is often referred to as "mint" condition. Bags in "excellent" condition show few if any signs of wear. Bags in "very good" condition show signs of light wear.

Appendix: Collectibles facts and figures

Table 1: Overview of selected indices

Fine Arts

| Index | Period | Methodology | Pros/cons |
|-------------------------------------|-----------|---|---|
| Sotheby's Mei Moses | 1955–2020 | <p>Price index:</p> <ul style="list-style-type: none"> – Computed using repeat sales data, the Sotheby's Mei Moses indices track the price difference between each subsequent sale. – The Sotheby's Mei Moses database only includes artworks that have sold more than once, using data collected from two auction houses, Sotheby's and Christie's, but not their online sales. | <p>Pros:</p> <ul style="list-style-type: none"> Historical comparability. True price development. <p>Cons:</p> <ul style="list-style-type: none"> Reduced universe, no buy-in lots, no online sales included, no retail and private sales. Selection and upward bias: collectors sell their pieces of art only after they have appreciated. Illiquidity of and long lags between repeat sales. Biased upward: collectors sell after they have appreciated in value. |
| Artnet C50 | 1983–2020 | <p>Composite methodology:</p> <p>The price indices are calculated by means of a mixed or hybrid model of a hedonic regression and a repeat-sales regression. The core of the model is to extend the repeat-sale regression to sets of comparables in order to get a broader database.</p> <ul style="list-style-type: none"> – Index values for individual artists within Artnet's market sector indices are calculated based on the median price per lot for each artist within these groups, excluding prints, multiplied by total lots sold for that artist. – The Artnet Contemporary C50 index ranks the top-performing 50 contemporary artists based on their index values each year, subject to a decay formula that looks back five years, and gives each of those 50 artists equal weighting in the index. This approach is said to capture 75% of all sold lots in the Artnet database, but does not include bought-in lots. | <p>Pros:</p> <ul style="list-style-type: none"> Index values for individual artists included. Results of online auctions included. Includes art sold once as well as repeat sales. <p>Cons:</p> <ul style="list-style-type: none"> Very significant survivorship bias. No way to determine the index value based on same top 30 artists if invested x years before. Historical comparability. Sotheby's/Christie's sales excluded. Does not include bought-in lots. |
| Artprice Global Index, Artprice 100 | 1998–2020 | <p>Art Price Global Index:</p> <ul style="list-style-type: none"> – Uses repeat sales methodology to track the performance of individual works of art that have been sold more than once at auction (bought-in lots are not included). <p>Artprice 100 (2000–20):</p> <ul style="list-style-type: none"> – This index identifies the 100 top-performing artists at auction over the previous five years who satisfy liquidity criteria (i.e. at least ten works of comparable quality sold each year), and then assigns the relative weight of each artist proportional to his/her annual auction turnover over the relevant period. – 1 January 2000 is the reference year, and the index is adjusted by a scientific committee on 1 January each year to reflect the evolution of art market. | <p>Pros:</p> <ul style="list-style-type: none"> Index values for individual artists broad global auction coverage. Uses data analytics to factor in most recent market information. <p>Cons:</p> <ul style="list-style-type: none"> Selection bias, based on the 100 top performing "blue-chip" artists, ignores others and thus has a bias toward more stable names. Composition of artists does not change during year (annual reshuffle), may not reflect true picture in a volatile year. Ignores most volatile artists and focuses exclusively on the art market's "blue chip" artists. Excludes online auctions. |
| AMR Fine Art index | 1976–2020 | <ul style="list-style-type: none"> – This index for individual artists is based on average values over 12 consecutive months, thus eliminating any seasonal effects. – AMR bases on the "hammer price." The "buyer's premium" is not included in the price recorded in the AMR database. | <p>Pros:</p> <ul style="list-style-type: none"> Simple calculation; addresses problems which exist in other methods - free of subjective assumptions (vs. hedonic) and uses all available auction price data (vs. repeat sales). Adjusts price data to filter out extreme values and seasonality, hence removes upward bias to a certain extent. Heterogeneous mix of collectibles; Provides Indices across many segments of art, antiques and other collectibles. <p>Cons:</p> <ul style="list-style-type: none"> AMR gathers only non-proprietary data published by auction houses. Private deals/ sales not included in the data. |

Table 1: Overview of selected indices, continued

Classic Cars

| Index | Period | Methodology | Pros/cons |
|-----------------------|-----------|--|---|
| HAGI Top Index | 2009–2020 | <ul style="list-style-type: none"> – A market-capitalization-weighted price index, i.e. the average price for each model in the index is multiplied by the number of surviving cars of that model known to exist. The index is calculated based on the “Chained-Paasche” method with a monthly frequency. – Data for the index are collected from four major sources (private contacts, marquee specialists, dealers and auction results). – The Historic Automobile Group International (HAGI) Top Index tracks the value of 50 of the world’s most desirable cars. – Similarly, HAGI puts out six indices, each pertaining to a specific sector of the market (e.g. Ferrari market, Porsche market, etc.). | <p>Pros: Breadth of data sources. Multiple indices to track diversified range of cars.</p> <p>Cons: Non-fungibility and variations in the top condition segment of collector’s cars.</p> |
| Hagerty Classic Index | 2015–2020 | <ul style="list-style-type: none"> – Monitors the values of 50 classic car models that were chosen to be representative of the enthusiasts’ market in the UK. – Updated quarterly from a combination of auction results, private and dealer sales, plus insured values. – “1950s American” index tracks classic American cars manufactured in the 1950s. – “Affordable Classics” tracks classic cars valued at under USD 30,000. | <p>Pros: The indices are inflation adjusted and track the global market.</p> <p>Cons: Limited universe of cars. Limited time span.</p> |
| Kidston 500 | 1994–2020 | <ul style="list-style-type: none"> – The index is created as a monthly average of 500 cars’ moving averages of auction results, indexed back to 1994=100. – Each car in the K500 has been chosen for its historical and intrinsic value. | <p>Pros: Exhaustive coverage of 500 cars; has individual cars and sectors ranked, which could give a good cross sectional overview at any point of time. Uses verifiable saleroom transactions (excludes unverified private deals) for quality of data. Comparability.</p> <p>Cons: The index may be too wide versus those which are considering 50/80/100 cars. The overall result may be too generalized, stable and may not capture relatively smaller moves in certain sectors.</p> |

Wines

| | | | |
|----------------------|-----------|--|--|
| Liv-ex Fine Wine 100 | 2001–2020 | <ul style="list-style-type: none"> – Represents the price movement of 100 of the most sought-after fine wines on the secondary market. – The Fine Wine 100 index is a total return index. – Liv-ex indices are based on merchant prices and hence all-inclusive of storage and carry costs. – Indices are calculated using the Liv-ex Mid Price (based on merchant transactions). Mid price is calculated by finding the mid-point between the current highest bid price and lowest offer price on the Liv-ex trading platform – Each price is then verified by a valuation committee for robustness. | <p>Pros: Focuses on transparency and liquidity in the fine wine investment market.</p> <p>Cons: Limited universe of wines.</p> |
|----------------------|-----------|--|--|

Table 1: Overview of selected indices, continued

Jewelry and watches

| Index | Methodology | Pros/cons |
|---|--|--|
| AMR indices – 1945–1975 Jewelry Index – Belle Epoque – Art Deco & Pearl Jewellery Index – Pocket-Watches 17th–20th Century Index | – Index for individual models based on average values over 12 consecutive months, thus eliminating any seasonal effect. – AMR bases on the “hammer price.” The “buyer’s premium” is not included in the price recorded in the AMR database. | Pros: One of very few indices available for this collectibles category. Simple calculation; addresses problems which exist in other methods – free of subjective assumptions (vs. hedonic) and uses all available auction price data (vs. repeat sales). Adjusts price data to filter out extreme values and seasonality, hence removes upward bias to certain extent. Cons: AMR gathers only non-proprietary data published by auction houses. Private deals/ sales not included in the data. |

Luxury handbags

| | | |
|---|--|---|
| AMR indices – Chanel Handbags Index – Birkin Handbags Index | – Index for individual models based on average values over 12 consecutive months, thus eliminating any seasonal effect. – AMR bases on the “hammer price.” The “buyer’s premium” is not included in the price recorded in the AMR database. | Pros: Only index available for this collectibles category. Simple calculation; addresses problems which exist in other methods - free of subjective assumptions (vs. hedonic) and uses all available auction price data (vs. repeat sales). Adjusts price data to filter out extreme values and seasonality, hence removes upward bias to certain extent. Cons: AMR gathers only non-proprietary data published by auction houses. Private deals/ sales not included in the data. |
|---|--|---|

Source: Credit Suisse

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A group of used vintage Rolex watches from Bob's Watches in Westminster. Pictured from left, 1978 Explorer II "Steve McQueen," a 1955 Rolex Submanner, a 1955 Rolex Submariner, "James Bond," a 1966 Rolex Daytona, "Paul Newman", and 1967 Rolex Submariner Red. Photo: MediaNews Group/Orange County Register via Getty Images

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Prof. Dr. Dirk Boll studied law and wrote his PhD thesis on distribution systems for art and the legal framework of the international art market. He joined Christie's in 1998. Following several positions in Germany, Switzerland and London, he took over the position of President Christie's EMEA (Europe & UK, Middle East & Africa) in 2017. He also lectures at the University of Hamburg on the subject of Art Management. He is a regular contributor to various daily papers and international magazines, and has published several books on the international art markets.

Helena Newman is the Chairman of Sotheby's Europe and Worldwide Head of Impressionist & Modern Art. In July 2016, she became the first woman to take an evening sale since 1990, and has brought down the hammer on many landmark occasions, including the highest value work ever sold at Sotheby's, and the highest value sale ever staged in London. Since joining Sotheby's in 1988, Helena has been at the forefront of the global expansion of the Impressionist & Modern Art market, building extensive contacts with a wide range of international collectors and institutions. She has also been instrumental in developing the international market for German & Austrian Art.

Gary Schuler is Worldwide Chairman of Jewelry at Sotheby's and oversees auctions and private sales. With over 40 years of experience, he is frequently called upon to consult private collectors, institutions and news outlets on all aspects of jewelry, from significant acquisitions and market trends to the complexities of an ever-evolving industry. In addition to being Sotheby's chief auctioneer for live jewelry sales, he has led his team toward extraordinary innovation in the online arena.

Jamie Ritchie became Head of Sotheby's global wine business in May 2016. He joined Sotheby's in London in 1990 and was responsible for launching Sotheby's wine auctions in New York in 1994 and Hong Kong in 2009. More recently, he was responsible for launching Sotheby's Wine, a retail store and online wine business, becoming the only major global auctioneer offering fine wines at retail. He is one of the world's leading wine auctioneers and has presided over many record-breaking auctions, including The Cellar of William I Koch. Sotheby's Wine's annual worldwide sales in 2019 significantly exceeded USD 100 million for the second consecutive year, led by a 20% increase in auction sales to a total of USD 118 million – the highest-ever annual total in Sotheby's history.

Sam Hines joined Sotheby's in January 2018 as Worldwide Head of its Watch Division. Based in Hong Kong, he leads the international team of Sotheby's Watch specialists, working with them on the company's flagship sales in Geneva, New York, Hong Kong and London, while continuing to advise watch collectors. A leading authority in the field, he has over 20 years of experience in the auction market and watch industry, joining the company from Phillips, where he was appointed International Head of Watches in 2015. Previously, he was International Co-Head of Christie's Watches Department, holding executive positions in New York and in Asia

We would also like to express our gratitude to our data provider partners:

Historic Automobile Group International (HAGI™) is an independent investment research house and think-tank with specialized expertise in the rare classic motorcar sector. The group has created benchmarks to track this alternative asset class accurately for the first time, using rigorous financial methodology usually associated with more traditional investments. The HAGI Index is published monthly in Octane magazine and referenced regularly in the financial media, including FT.com, the Wall Street Journal, the Economist and Welt online. The purpose of this approach is to lend transparency to the sector and enable market participants to make informed decisions based on data-driven fundamentals. For more information, visit <http://www.historicautogroup.com/> or contact Dietrich Hatlapa at dh@historicautogroup.com

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AMR is an independent provider of global intelligence for fine art, antiques and collectible markets since 1976. Established in London with a goal to bring transparency to price trends in the burgeoning art market, AMR pioneered the concept of the fair market value as a benchmark for valuing art, antiques and collectibles. As the longest running authority on the global art market in the world, AMR has forged working relationships with tax authorities (HMRC), financial publications (FT), insurers (Hiscox) and others. AMR's statistical analysis and insights are frequently featured in the Financial Times, The Wall Street Journal, The Times, The Art Newspaper, The Telegraph and others. AMR's subscription-based online platform provides access to a range of innovative tools and services and AMR's latest research. AMR does not derive profits from selling or dealing with art, antiques or collectibles. For more about AMR please visit artmarketresearch.com.

ArtTactic was founded in 2001 by Anders Petterson, and is the first art market research company to use crowd-sourcing as the main tool for collecting qualitative and quantitative data on the art market. From the outset, the goal was to build a global art market intelligence network of thousands of knowledgeable, experienced and talented individuals. This goal has already been achieved, and the launch of ArtTactic Forecaster in 2015 has further expanded the crowd-sourcing initiatives and the growing pool of innovative and new art market data that will support the call for more transparency in the art market.

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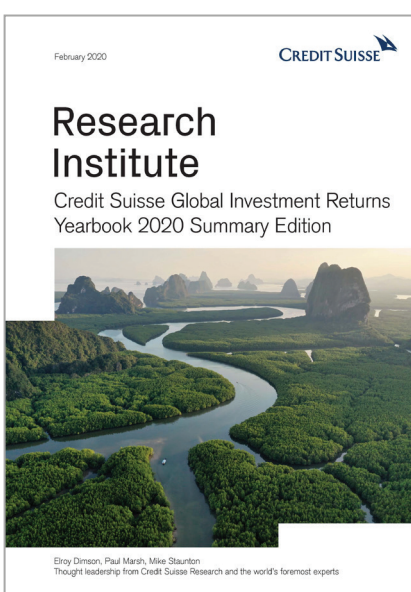
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