**Case study**

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Managing liquidity risk in the art market

Risk monitoring tools and the development of the art-secured lending market

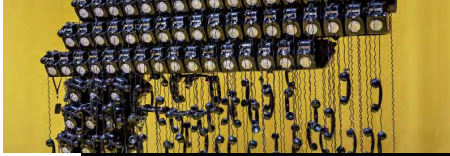
Through years of experience in the market, FCA-regulated fintech, Overstone has come to see that the main barrier to unlocking art as an asset, is the lack of a systematic, repeatable, and transparent process of assessment, on par with other asset classes. While art valuation has been performed for centuries, the missing link to the financial industry is understanding liquidity.

If art is to be treated as a financial asset, we must be in a position to measure and communicate risks with appropriate financial metrics. This could allow the unlocking of a vast opportunity, moving beyond what is today a highly manual, subjective, opaque, and unregulated activity. The combination of liquidity and risk tools along with the current changes in regulatory environment, including the recent introduction of the fifth anti-money laundering directive (AMLD5), are steps towards creating the necessary infrastructure for this new asset class.

Recent developments in the art-secured lending space

In late March of 2020 when the European markets were realizing the rapid advance of COVID-19, uncertainty and ensuing volatility were the general response. The following months were characterized by a continued search for liquidity, whether to answer margin calls, or take advantage of unexpected investment opportunities. In that first week of volatility alone, Overstone saw inquiries from collectors for loans against art collections surge by over 400%. Art, 'the last unleveraged asset', was suddenly reconsidered by even the most traditional institutions and collectors as a (much needed) source of liquidity. A traditional Swiss-based private bank had been tentatively examining the art secured lending proposition for a year prior, however not taking proactive steps. Following a surge of requests from their clients, our art backed lending platform was onboarded within a week.

Demand for art-secured lending has been growing steadily over the last few years, with 2020 seeing an exponential rise, in what we believe is an inflection point for the art-secured lending industry. The behavior of the markets has underlined the importance of liquidity versus static value. When the financial markets experienced volatility and liquidity was required, it was art, the most underleveraged asset that could most easily release it. Collectors realizing a new source of liquidity, and institutions who have now begun to lend against art, will not backtrack. From our standpoint across the market, and based on work with both borrowers and lenders, we conclude that the industry is heading on a route of rapid growth, as 2020 has been instrumental in bringing art-secured lending to the mainstream of private banking and wealth management.



Demand shift for art-secured lending services

Overstone has been engaging with major global private banks for years, enabling them to begin offering art-secured lending in Europe and the US, and currently expanding to Asia, allowing the risk departments to understand downside risks, and providing a powerful relationship tool for private bankers. This position has enabled Overstone to observe the profound shift the industry has undergone. While the bigger banks tend to take long periods of time to discuss and onboard a new service as unique as art-secured lending, the process has accelerated significantly in the last year. This was unequivocally due to a rise in client demand which prompted the banks to seek ways to incorporate the service. The pattern was clear. In the early days of COVID-19, Overstone was approached by collectors and family offices searching for lenders, and a month following Overstone was approached by the banks. The onboarding of at least half a dozen new private banks in Europe and the US to our platform can be attributed to the events of 2020. At least double that number are in advanced stages of examination. The growth of players active in the sector is contributing to more awareness among others, and Overstone has recently started working with Avaloq to ease future integrations and offerings for new banks.

This accelerated pace of the big institutions

however, pales to other industry players: the smaller European and American local banks. These operate as a hybrid of a financial institution and a startup. With close relationships to their local clientele, significantly less internal process, and a more outsourced approach to services, their pace of incorporation of art-secured lending is swift and completed within a couple of months.

Challenges facing financial institutions that want to offer art related services

Art-secured lending has been steadily growing in recent years, however the size of the industry compared to the opportunity is negligible. The value of art used as leverage compared to its potential is so modest, art can still be classified as an unleveraged asset. A large-scale development and adoption of art-secured lending was hindered in the past by the age-old challenge of 'lack of communication'. Art has historically been valued for its aesthetic qualities, a concept foreign to the financial and tech industries, whilst the art market relies on its own internal codes and standards. Concepts of systematic, objective valuation, downside measurable risk, and transparency, all required by financial services and technology companies, are similarly challenging for the art industry.

Overstone's risk monitoring tools

Overstone has worked closely with select risk departments in major financial institutions

over the last 5 years to develop the Art Risk Monitor™ score (ARM™), a measure of the liquidity and volatility risk of individual art works. Often overlooked, and in essence the flip side of value, liquidity measures whether an artwork can be sold at an expected price in current market conditions, at a specific point in time. The ARM™ score is a tool to measure the downside risk. The algorithms feed off a triangulation of publicly available and proprietary data, including over 10,000 artists and 2.5 million sale results, covering any artist with presence in the secondary auction market, from the Renaissance and up to the hyper-contemporary auction stars. Scores are irrespective of medium but require existence of significant data.

The ARM™ is scored on a scale of 1-100, with 100 being the most liquid. A low liquidity score indicates a lack in depth of market and demand, affecting the sale performance of a work, impacting if the work sells or not, and how high will the price achieved be. The ARM™ score is a percentile, and force ranks all objects in the market. Thus, a work with a score of 75, will be more liquid than 75% of the works that have appeared in the overall art market in the last 5 years. The distribution of the scores is in a bell curve, and many more art works will have a score around 50, which will be the average, than works which score in the extreme high or low percentiles.

The liquidity score changes dynamically as auctions occur in the market. We have found that a trend in liquidity is typically a leading indicator to future price changes, as it hints at a drop or rise in demand levels.

Price volatility and elasticity for art are statistically lower than most assets, the critical factor of market risk, is liquidity, the ability to sell at a given point in time. This is measured per object, and two objects by the same artist could have a very different liquidity and market depth. Two works by Fernand Léger can be used as an example, *Le Campeur, 1er état*¹², sold by Sotheby's in May 2019, received an ARM™ score of 67, and sold above the high estimate. Composition (*Éléments mécaniques*)¹³ by the same artist, was offered by Christie's in October 2020, received an ARM™ score of 31, and was not sold. Each object is scored based on over a dozen parameters. The market of the artist is not the sole defining factor, but a context for the different interactions between these parameters. This contributes to different scores and performances as seen above for the two works by Leger.

What does this mean for lenders and borrowers?

Understanding the specific risks associated with each work, rather than being blinded by a famous artist, enables banks and collectors to create better, less risky collaterals. This

contributes to an optimized risk/reward portfolio and more accurate, potentially higher, LTV's. The understanding of risk is an important step in treating art works as an asset.

When examining the robustness of the ARM™ score performance, as in the scatter chart below, we measure the ratio of the price achieved versus the estimate of the work. Any work sold at 85% of the low estimate or below, is considered a disappointing performance. Overstone back-tests its algorithm, by comparing auction results to scores given to the works. The graph below showing results from the Christie's ONE sale in July 2020, the X axis with ARM™ scores, the y axis with performance as ratio of the low estimate. There is a clear trend of increasing performance the higher the ARM™ score.

¹² <https://www.mutualart.com/artwork/1/E-CAMBELUR-3FB-ETAT/CC6615A6D72621E4>
¹³ <https://www.mutualart.com/Artwork/Composition-Elements-mecaniques-/EA45CE3668417858>

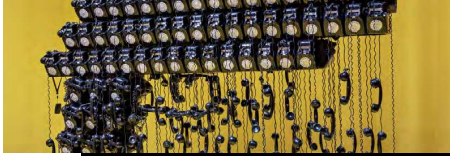


Figure 89. One Auction

Scatter chart of Christie's ONE auction sale results in July 2021: Performance vs. ARM™ scores



Key challenges for the future and how best to address them

As the field accelerates growth and new players arrive eager to claim territory, caution is called for. The more art is used as collateral, the higher the potential risk of market flooding should another global event generate a financial crisis. Data and research shows an interesting development in 2020, underscoring the importance of understanding a work's liquidity profile: while the art market had a significantly lower volume of sales during 2020, the value did not drop at the same rate. The items that are most liquid had higher realized prices versus their estimates compared to previous years, suggesting that even in a market downturn, highly liquid art assets will still sell well.

From Overstone's cross-industry work, we have noted that the liquidity metric is the missing link between the traditional valuation, which while suitable for the art world is not understood by external industries, and potential cross-industry partners. This link is what will allow growth at scale for art-secured lending. So far, most art finance products have been ad-hoc with a subjective or internal valuation process and risk making decisions. The key to growth-at-scale for art-secured lending and additional art finance products is a standardized, replicable process which considers the criteria of different industries.