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CULT WINES

SOLUTIONS FOR FINE WINE

FINE WINE VS GLOBAL EQUITIES

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2017

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Contents

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Introduction

The recent turbulence in the stock market has fueled debate amongst global investors concerning the importance of portfolio diversification and capital allocation in to alternative markets. This report defines the genetics of Fine Wine as an asset class and its relationship with global equities.

Our findings confirm that Fine Wine is the leading alternative asset class, governed by a unique set of market fundamentals and risk factors. Exposure to this market provides stability in market down-turns and low levels of correlation during periods of 'normal' market performance.

- In a world where the performance of financial assets has been historically volatile, we have demonstrated that investing in fine wine, offers low volatility in addition to capital growth.
- History shows that fine wine has displayed consistently lower volatility in return over both the short and long term, compared to equities of emerging and global markets.
- Fine Wine returns have consistently displayed a weak response to swings in global equity markets, indicating a lack of correlation to the traditional financial markets.
- During a deteriorating economy, fine wine has proven to be a defensive asset class, providing protection to investors who hold equity-dominated portfolios.
- Rising wealth, weakened GBP and a continued interest in fine wine within China and other non-traditional wine markets, will continue to strengthen growing demand for wines with strictly limited supply. The subsequent impact on pricing will continue to support positive trends in the market over the short long term.
- The outlook for the fine wine investment market is positive, with broadening interest into regions outside of Bordeaux (e.g. Burgundy, Italy & USA) and fundamental limited supply contributing to continued growth.

"The Fine Wine 1000 – the broadest measure of the fine wine market – was one of the best performing indices, rising 11.3% in 2017, only surpassed by the Burgundy 150-index."

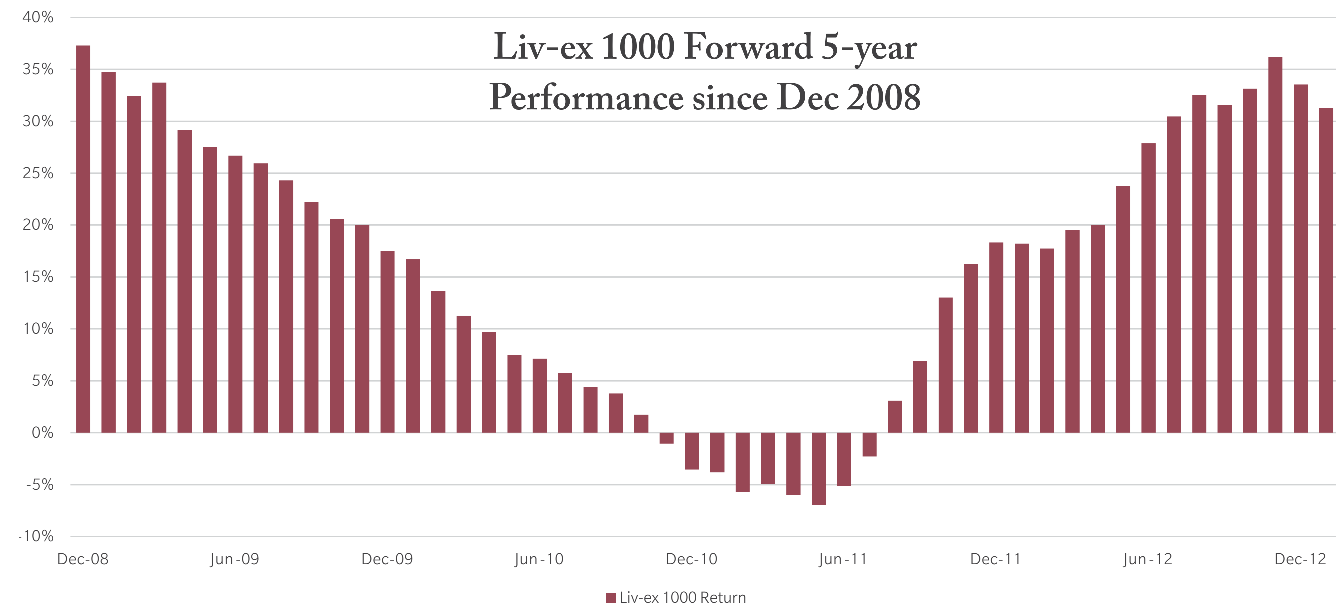

Exhibit 1: Forward 5-Year Return Turned Positive from Year 2012 **Data:** 31st March 2018 **Source:** Liv-ex

What Does 5-Year Tell Us?

As can be observed in Exhibit 1, the forward 5-year return of Liv-ex 1000 follows a U-Shape, with highest forward rate of return at the end of 2008 and 2012 and the lowest return during period of 2010-2011. This negative return was largely due to the China driven - peak which occurred in 2011 during which the Liv-ex 1000 hit 281.62 in August.

Since then, the wine market had officially entered a correction stage which ended in August 2012, with the Liv-ex 1000 index closing at 242.75 at the end of August 2012. As expected, the fine wine market has consistently delivered positive absolute return over any next 5-year return. More importantly, of the total 51 Five-Year periods that we covered (2008 - 2018), only 6 periods experienced negative returns.

Conventional investors have typically focused on publicly traded equities, with the expectation of realizing the ownership benefits of growth in a company's earnings through increased dividends and capital appreciation.
However, non-financial assets are becoming increasingly popular with both high net worth and 'everyday' investors, as confidence in the public markets has been dented by volatility, and the ultra-rich look to deploy more capital in to 'Passion' Assets.

According to Credit Suisse Global Investment Returns Yearbook 2018, for wealthy investors, the proportion invested in alternative assets may not be very high. But in absolute terms, the total monetary value of wealthy investors' private asset holdings is relatively large. Furthermore, in a world where the market sentiment is largely influenced by the monetary return expectation, tangible assets such as fine wine, art or stamps offer not only financial gain but more importantly, personal enjoyment.

Stabilise Your Portfolio

Considering risk and volatility, holding a fine wine portfolio is expected to show lower volatility of returns compared with a 100% equity-based portfolio. Nowadays, the performance of marketable securities is considered volatile, we believe investing in alternative assets can offer some stability in both the short term and long term.

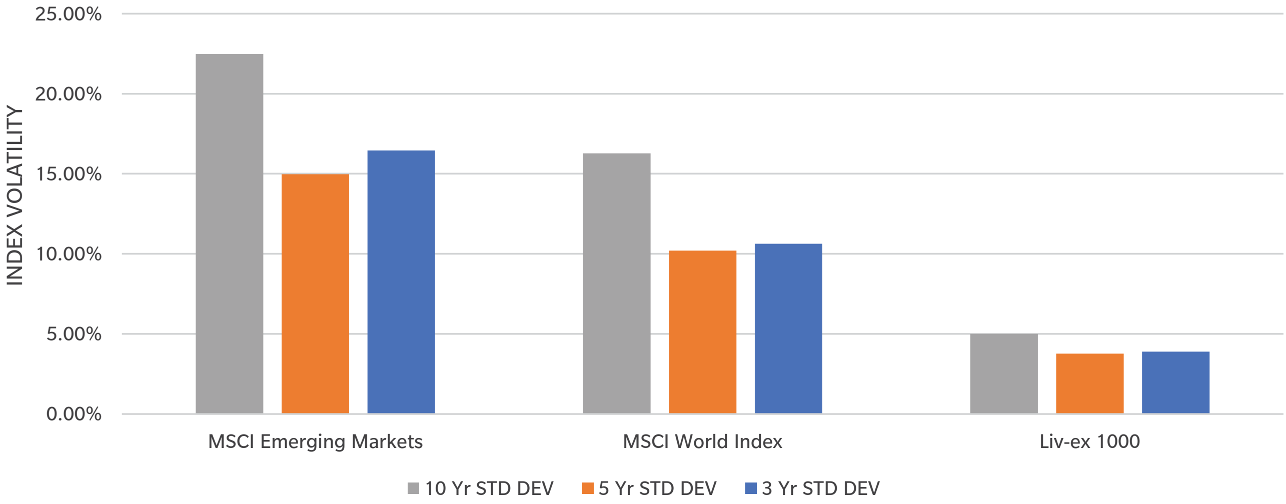

Exhibit 2: Fine WIne Market Shows Lower Volatility Compared to Equities (2008-2018) **Data:** 30th March 2018 **Source:** Liv-ex, MSCI World Index

Index volatility (shown in chart above) indicates the degree of variation of index level and measured by the standard deviation of their monthly returns. A lower volatility means that price returns do not fluctuate dramatically over a period of time. 3-year volatility uses 36 monthly returns of MSCI World Index, MSCI Emerging Market Index and Liv-ex 1000 Index from 2015 to 2017, 5-year volatility uses 60 monthly returns from 2013 to 2017, 10-year volatility uses 120 monthly returns from 2008 to 2017.

As can be observed (Exhibit 2), investing in fine wine market exhibits consistently lower risk over 3, 5 and 10 – Year period. Over the 10-year period, we measured the volatility on 120 monthly returns of LIV 1000, the broadest measure of the fine wine market, from Dec. 2008 to Dec. 2017, and compared it with its performance with MSCI World Index and MSCI Emerging Markets. For investors, the higher the volatility, the riskier the security or asset. Compared with a lower 4.997% of Fine Wine 1000, MSCI World Index volatility of 16.28% can be considered risky in generating return.

This is largely due to the fact that equity market performance is highly sensitive to economy growth and an uncertain political environment. Any major events may cause a larger-than-expected effect on the markets. But this kind of effect could have less impact on the fine wine market, as observed by its historical performance.

The results show that the LIV 1000 has a 3-year standard deviation as low as 4.9%, while the MSCI Emerging Market Index has a 10-year standard deviation of 22.48%. Over the 3 – year period, the difference is around 6%, with MSCI World Index having volatility of 10.62%. For the longer 10-year period, the difference can be as large as 10%.

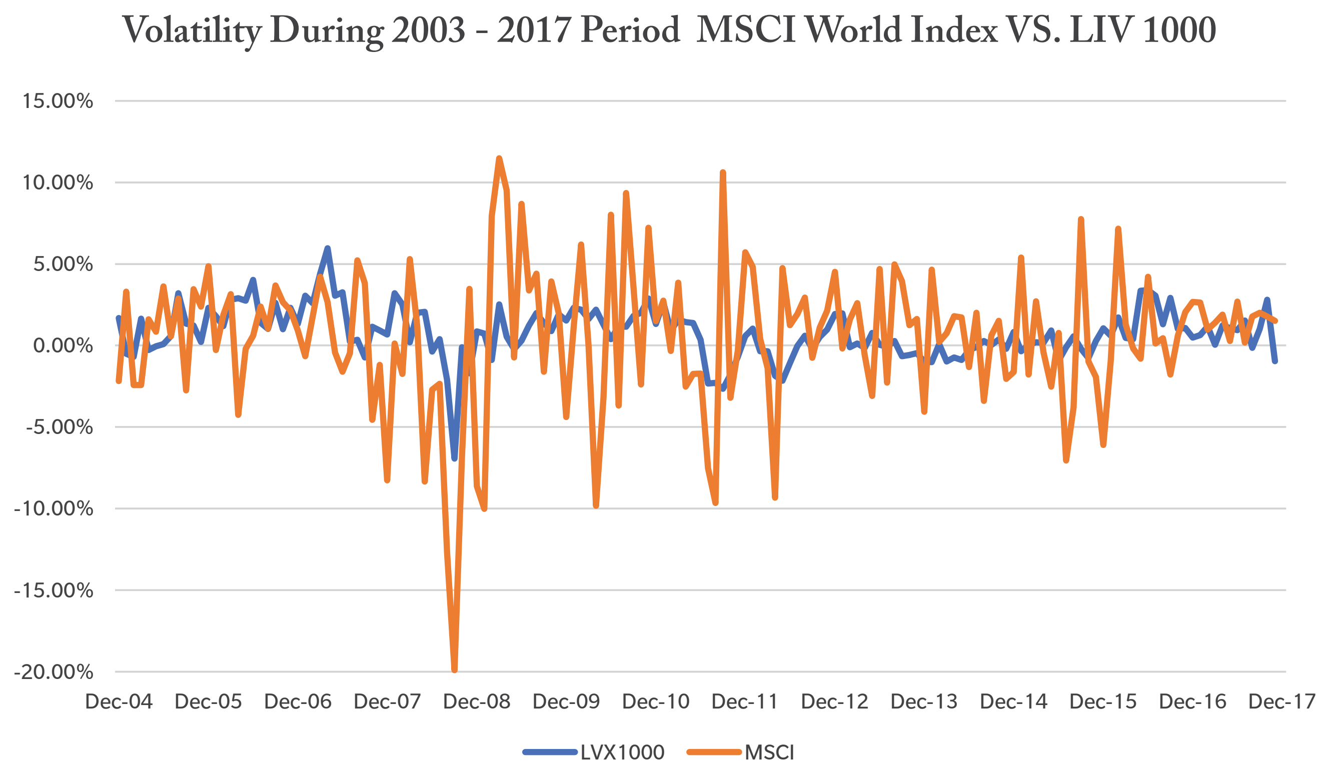

Exhibit 3: Volatility of return comparison between MSCI and LVX1000 **Data:** 31st March 2018 **Source:** MSCI World Index, Liv-ex 1000

In fact, our research shows that although there is a degree of positive correlation between the traditional financial markets and wine, the level of correlation is limited. More importantly, as can be observed in Exhibit 3, the dispersion of fine wine market returns are consistently lower, compared to the MSCI World Index.

This big difference in volatility supports the case for incorporating fine wine in a diversified portfolio, providing access to greater consistency and more stable returns - especially during periods when traditional markets are in a volatile state.

Wealth Preservation

20 years ago, investing in fine wines would often have generated greater capital growth than equities. For an investor today, who may not have such a long investment horizon – can the same performance be achieved? How has the wine market performed in recent times?

Exhibit 4 (overleaf) provides some insights on how the performance of fine wine compares to other investment indices and asset categories in recent times. As recently reported by Liv-ex, the 2017 performance of Liv 1000 was above the FTSE. Long considered as a comparable to fine wine, gold not only delivered unattractive returns, but also displayed the greatest volatility among other representatives.

Many independent researchers have also confirmed that a well-diversified investment portfolio would benefit from a small allocation to alternative assets.

The extent to which diversification is beneficial, depends on the degree to which the asset classes are correlated. Put simply – the lower the degree of correlation, the more diversified, the more beneficial.

However, correlation of alternative assets and traditional financial asset is dynamic and notably different in periods of economic distress and growth. Exhibit 5 shows the correlation matrix among different asset categories during different periods and demonstrates this change more clearly.

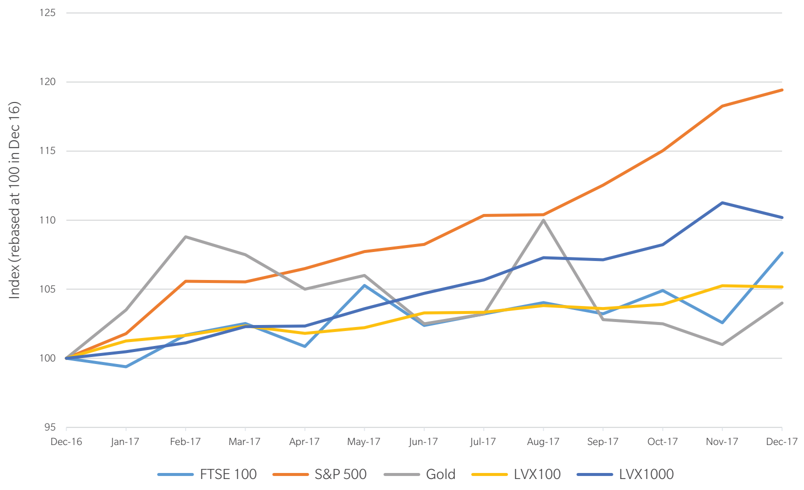

Exhibit 4:
Fine wine 1000 outperformed FTSE* and Gold in 2017

Data: 31st December 2017
Source: Liv-ex

FTSE 100, a market capitalization-weighted index of the 100 largest UK companies trade on the London Stock Exchange

During the financial crisis between 2007 and 2009, Fine wine exhibited a relatively higher correlation with equity markets – as we know, few if any sectors were un-affected by the global turmoil that marked this economic period. This begs the question – was the benefit of diversification eroded? In reality, fine wine proved to be a crucial defensive holding for those exposed to equity market performance, highlighted clearly in Exhibit 6.

2015 – 2017 Correlation on Assets Returns

	LIV 1000	Gold Futures	MSCI World	FTSE All Shares
LIV 1000	1			
Gold Futures	-0.0051885	1		
MSCI World	-0.0251616	-0.12996835	1	
FTSE All Shares	0.0530675	0.14969836	0.43741165	1

2008 – 2010 Correlation on Assets Returns

	LIV 1000	Gold Futures	MSCI World	FTSE All Shares
LIV 1000	1			
Gold Futures	0.3391453	1		
MSCI World	0.4936217	0.1546152	1	
FTSE All Shares	0.4353976	0.0055800	0.9126480	1

Exhibit 5:
Correlation between asset classes at different period

Source: Liv-ex, FTSE, MSCI.

The correlation of approximately 0.91 indicates a strong association between MSCI World Index and FTSE All Shares during financial crisis around 2008, whereas the correlation of -0.025 indicates a negative relationship between LIV 1000 and MSCI World in 2017.

**For investors, it is important to note that correlation does provide useful information on direction, which tells us how return of each asset class covary, but not on assets mean return itself. For example, a correlation of +1 to the monthly returns between FTSE All shares and MSCI World Index does not tell us that their mean returns are the same. Correlation does not imply causation.*

Exhibit 6:
Fine wine protect investors from suffering greater loss during financial crisis period

Source: Liv-ex, FTSE, MSCI.

The correlation of approximately 0.91 indicates a strong association between MSCI World Index and FTSE All Shares during financial crisis around 2008, whereas the correlation of -0.025 indicates a negative relationship between LIV 1000 and MSCI World in 2017.

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5-Yr Rolling Beta (with MSCI World)

Exhibit 7:
Decline in 5-Year Rolling Beta against MSCI World

Source: Liv-ex, MSCI

Note: Beta (in this chart) is calculated as the Covariance between the return of the Liv-ex 1000 and the return of MSCI World Index divided by the variance of the equity index (over a 5-Yr/60 months period)

It is widely reported that the correlation between fine wine and global equities is low. But when the type of risk and level of risk we could utilize are taken into account, this correlation requires further clarity. Thus, it is important to understand how fine wine as an individual asset type responds to swings in the traditional financial market over time. In finance, a beta of 1 indicates that the security's price moves with the market, whereas a beta of less than 1 means that the security's price movement is theoretically less volatile than the market.

We tend to interpret the beta of fine wine against global equities by using a similar way of thinking. Continual decline in 5 -year rolling beta spanning from 2010 to 2017 suggests that fine wine does not have the same level of market risk (see Exhibit 7).

During 2010 – 2017, our research shows that investment in fine wine would not be significantly affected by the performance of traditional financial markets, further establishing the role of fine wine as a credible alternative asset.

Reasons for Future Optimism

Our research clearly indicates that fine wine continues to provide a viable opportunity for investors looking to diversify and expand their portfolios in to alternative assets.

From our studies, we can see how Fine Wine can act as a defensive asset class in times of economic crisis but at the same time will benefit from the economic upside due to the creation of wealth, fueling spending on luxury assets. Furthermore, demand for fine wine does not tend to fluctuate too much during periods of economic deterioration – wine consumers will always consume wine. The niche characteristics and relative size of the fine wine market insulates the market from wider macro-economic factors and it can therefore protect investors from greater loss. The case for investing in wine as a strategic alternative asset class has strong merits and the outlook for the market remains promising with broadening interest from emerging markets such SEA, China, Mexico and parts of Africa.

- As long as the fundamental supply and demand dynamics behind fine wine remain unchanged, we believe the fine wine markets will continue to perform well in absolute terms and relative to other types of tangible assets.
- How much the diversification benefits add to a portfolio can change depending on the economic conditions.
- History shows that adding fine wine to a portfolio should significantly reduce the total risk of equity-based portfolio and protect investors from suffering greater loss during periods of economic distress.
- Although the diversification benefits aren’t as pronounced during a financial crisis due to the positively correlated relationship between the economy and fine wine market, adding fine wine to the portfolio is expected to protect investors from suffering greater loss, acting as a key preserver of wealth.
- The rising wealth, weakened GBP and continued interest in fine wine from China and other non-traditional markets will help amplify the positive trend in the fine wine investment market.
- Cumulative performance for fine wine since 2003 shows positive signs and expected to have more room to grow, supported by consistently lower correlation with traditional financial assets and lower volatility of return.
- During an improving economy, covering 2015 – 2017, we found that the performance of fine wine improves with the economy to a lesser degree, but the return is still attractive compared to gold.

“Buying Interest broadened beyond Bordeaux, pushing up prices of Burgundy and Barolo wines.”

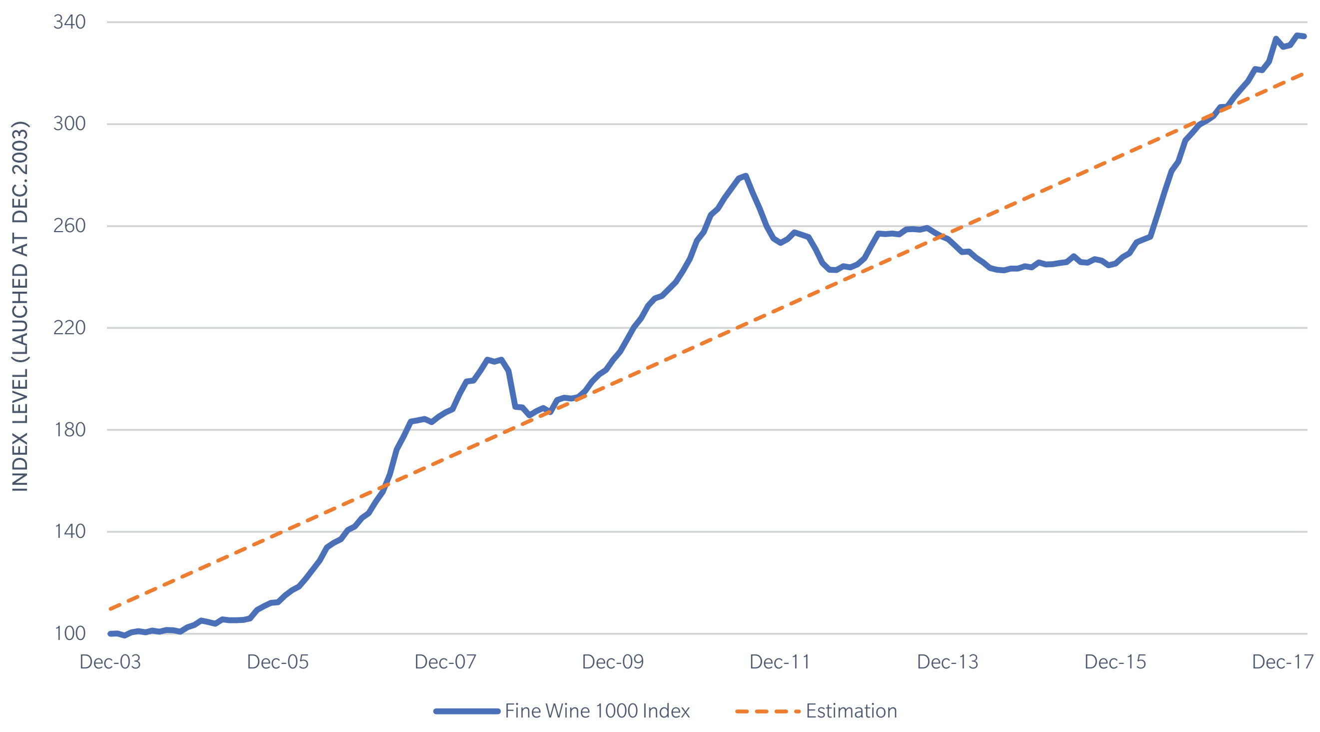

Exhibit 8: Cumulative Performance of fine wine since 2003 **Source:** Liv-ex

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