Artprice100©

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2025-07-20

Table of contents

1	Introduction		
2	Materials and Methods	2	
3	Results and Discussion 3.1 Returns	5	
4	Conclusions	7	
5	Appendix	7	

1 Introduction

The Artprice100 is a financial index designed to monitor prices on the "blue chip" art market i.e., the subsection of the art market composed of the highest-valued and most recognized artworks, globally. It was created in 2018 by the French company Artprice (founded in 1987). The main stated goal of such an index is to provide financial operators (e.g., private banks) with a tool allowing them to monitor the blue chip art market without the need for artistic expertise.

The value of the Artprice100 was arbitrarily initialized at 100 on January 1st 2000 and is reevaluated once a year – on the 1st of January. The evaluation process is as follows:

• On January 1st 2000, \$100 were figuratively invested into the artowrks of the 100 top artists in terms of turnover (sum of the transaction costs) and in terms of sales regularity. The way sales regularity is measured is undisclosed as far as I know, but Artprice states

that at least 10 "homogeneous" artworks must be sold each year for an artist to be included. These selection criteria are measured over the previous five years (1995-1999 included). The weight of each artists depends on its turnover.

- The following year (on January 1st 2000), based on auction data, the worth of the investment made on the previous year can be updated. The resulting value is reinvested on the top 100 artists selected based on the same criteria, but looking at a new 5-year window (1996-2000).
- And so on.

This process is overseen by an expert committee. It is not clear to me whether the evaluations are completely objective or if the committee subjectively influences the index values, somehow.

In this document, we will carry out a basic financial analysis of the Artprice100 to put in it perspective with conventional financial assets given that, as far as I know, Artprice100 is absent from trading platforms and exchanges (e.g., via ETFs).

2 Materials and Methods

Artprice100 values were retrieved from artprice.com.

As a benchmark, conventional financial index, we will use the MSCI World index (USD). This a market-capitalization-weighted index covering publicly-traded companies in developed countries. We will use the "net" level of the index meaning that dividends are reinvested with taxes considered. Data was retrieved from msci.com.

Both indexes are converted from USD to EUR using exchange rates retrieved from investing.com.

And they are subsequently inflation-corrected using harmonized consumer price index values for France retrieved from insee.fr. Thus, all returns and price changes are expressed in real terms, not in nominal terms.

3 Results and Discussion

3.1 Returns

Figure 1 compares how the two indexes have evolved in the 25 years following 2000. The art market index has a substantial lead. And this lead (i.e., the "Difference" line) has been growing rather linearly over the study period – which signifies that the overperformance of the Artprice100 over the MSCI World Net was consistent over the examined time span.

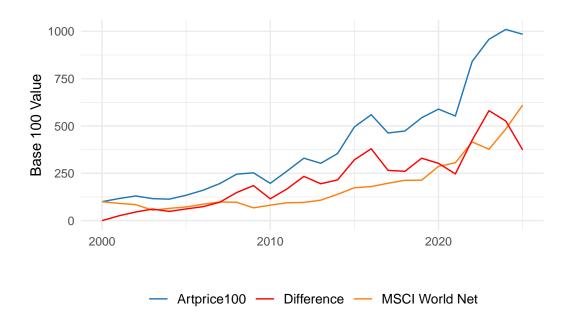


Figure 1: Evolution of Artprice100 & MSCI World Net (Base 100) from 2000 to 2024

The compound annual growth rate (CAGR) equals 9.6% for the Artprice100 and 7.5% for the MSCI World Net. The difference between the two CAGRs – 2.1 percentage points – summarizes the overperformance presented in Figure 1.

Figure 2 shows the yearly returns of both indexes. We can see that years with a negative return on the MSCI World Net have a positive return on the Artprice100, except from 2002. Also, we note that the impact of the global financial crisis was reflected on the MSCI World Net in 2008 and only the following year on the Artprice100. Therefore, the Artpice100 presented some partial hedging properties relative to the global stock market. Except in 2002, the years with a negative Artprice100 return had a positive return on the MSCI World Net. Though, it would be an exageration to deem the two indexes countercyclical: in most years, the value of both indexes grew.

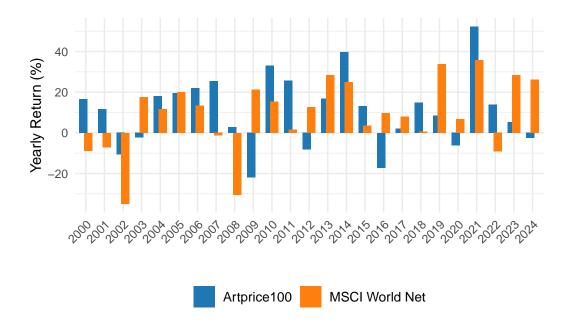


Figure 2: Yearly Returns of Artprice100 & MSCI World Net from 2000 to 2024

Figure 3 shows the distribution of yearly returns for each index. The range in which both indexes' returns evolved is similar (also showed in Figure 2).

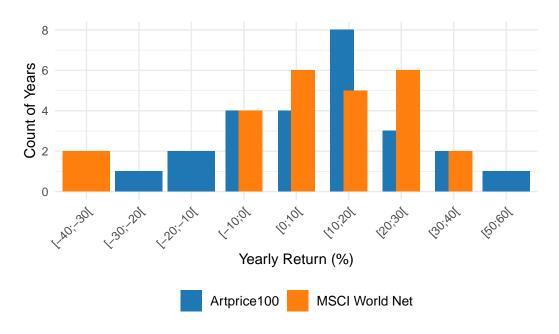


Figure 3: Distribution of the Yearly Returns of Artprice100 & MSCI World Net from 2000 to 2024

3.2 Volatility

The standard deviation of the yearly returns presented above equals 17.5 percentage points for the Artprice100 and 17.9 percentage points for the MSCI World Net.

Unlike the standard deviations, the max drawdowns are substantially different: 22% for the Artprice100 and 44.9% for the MSCI World Net.

Hence, both indexes had an equivalent level of overall volatility (standard deviation), although with more pronounced negative extremes (max drawdown) for the MSCI World Net. But note that the yearly valuation frequency of the Artprice100 hides an unknown amount of intra-year volatility.

Using a null risk-free rate, the Sharpe ratio equals 0.549 for the Artprice100 and 0.419 for the MSCI World Net. That means that a unit of return from the blue chip art market came at a lower volatility cost than a unit of return from the MSCI World Net index. A higher risk-adjusted yield is a strong quality for the Artprice100.

3.3 Correlation

Figure 4 presents the linear regression between the two indexes.

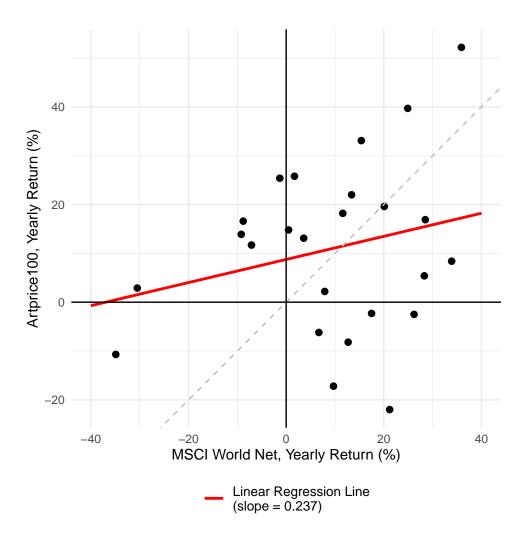


Figure 4: Regression of the Yearly Returns of Artprice100 & MSCI World Net from 2000 to 2024

The Pearson correlation coefficient between the indexes is 0.243 indicating a positive yet weak correlation. This further shows that the two indexes are not countercyclical. Nonetheless, the weakness of the relationship means that the blue-chip art market may still be adequate to bring some amount of diversification and hedging to a stocks portfolio.

4 Conclusions

During the 2000-2024 period, the Artprice100 index presented a higher risk-adjusted yield than the MSCI World Net index. Its real CAGR was substantially higher while its volatility was somewhat lower. The Artprice100 provides a moderate amount of diversification relative to the stock market. If those past behaviors continue (knowing that nothing says that they will), the blue chip art market appears as an interesting addition to a stocks portfolio. Key metrics are summarized in Table 1. Also, note that this analysis ignores market liquidity and atomicity considerations which are important factors to take into account for a relatively small market like the blue chip art market.

Table 1: Summary of the Comparison between the Artprice100 and the MSCI World Net (2000-2024)

Metric	Artprice100	MSCI World Net
CAGR (%)	9.600	7.500
Yearly Return SD (percentage points)	17.500	17.900
Max Drawdown (%)	22.000	44.900
Sharpe Ratio	0.549	0.419
Pearson Correlation Coefficient	0.243	0.243

5 Appendix

This qmd took 0 minutes to render. It was rendered in the following environment:

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Platform: x86_64-pc-linux-gnu
Running under: Ubuntu 24.04.2 LTS
```

Matrix products: default

BLAS: /usr/lib/x86_64-linux-gnu/openblas-pthread/libblas.so.3

LAPACK: /usr/lib/x86_64-linux-gnu/openblas-pthread/libopenblasp-r0.3.26.so; LAPACK version

attached base packages:

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[1] stats graphics grDevices datasets utils methods base
```

other attached packages:

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[5] data.table_1.17.6

loaded via a namespace (and not attached):

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glue_1.8.0	htmltools_0.5.8.1	scales_1.4.0	rmarkdown_2.29
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