

THE ANATOMY OF BLUE-CHIP ART MARKETS

Empirical Evidence of Within-Market Diversification of Blue-Chip Art

ECO 4903: Undergraduate Seminar

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I. INTRODUCTION

This paper uses quarterly Artprice index data from 1998 to 2025 to examine how different segments of the blue-chip art market respond to broad valuation cycles. Although fine art is widely discussed as an alternative asset class, its internal risk structure and degree of systematic exposure remain insufficiently understood in both academic finance and wealth-management practice. Existing work often treats “art” as a single investment category, obscuring the substantial heterogeneity that exists across mediums and historical periods. Understanding these differences is essential for evaluating art’s diversification potential and for determining when—and in what form—art behaves more like a cyclical asset, a defensive store of value, or an idiosyncratic cultural good.

This study situates art within a formal asset-pricing framework by applying a single-factor market model to segment-level returns. Specifically, it tests whether the quarterly returns of various mediums (Painting, Sculpture, Drawing, Photography, Print) and valuation periods (19th Century, Modern, Post-War, Contemporary) exhibit differential sensitivity to movements in the overall art market. Systematic exposure, measured by β coefficients, serves as the primary metric of whether each segment co-moves with the global art index or behaves independently of market-wide fluctuations. The analysis is organized around four testable, refutable hypotheses motivated by valuation-cycle theory, the Capital Asset Pricing Model (CAPM), and Modern Portfolio Theory (MPT):

H1: Art-market segments differ in their systematic exposure (β) to global valuation cycles.

H2: Traditional mediums (e.g., Painting, Sculpture) exhibit lower β than more speculative categories (e.g., Drawing, Photography).

H3: Valuation periods differ in cyclical sensitivity, with Modern and Post-War art showing higher β than 19th Century or Contemporary Art.

H4: Systematic exposure is partial rather than complete; the global art index explains only a fraction of segment variation.

By integrating asset-pricing methods with a granular segmentation of the art market, this paper contributes empirical evidence on within-market diversification and clarifies how heterogeneous art categories absorb valuation cycles. The findings have implications for portfolio construction, risk evaluation, and wealth-management strategies that consider blue-chip art as part of an optimized investment allocation.

II. LITERATURE REVIEW

ART AS AN ALTERNATIVE ASSET AND DIVERSIFICATION TOOL

Jurevičienė, D., & Savičenko, J. (2012). *Art investments for portfolio diversification. Intellectual Economics*, 6(2), 41–56.

Jurevičienė and Savičenko (2012) examine the role of art as an alternative investment instrument capable of enhancing portfolio diversification. Their study, published in *Intellectual Economics*, employs correlation regression analysis and efficient frontier modeling to determine whether art's performance is independent from traditional financial assets such as equities and bonds. Using data from the Artprice Global Index (AGI), the S&P 500, and other benchmarks including Bloomberg and NAREIT, the authors find that art exhibits a weak correlation with the stock market, indicating its suitability as a diversification asset or hedge. Through portfolio

optimization models, they show that including art can improve portfolio returns at comparable levels of risk, particularly when substituting art for risk-free bonds. Furthermore, their forecast of the AGI from 1995 to 2014, conducted using a linear trend model, predicts sustained growth in art values with an 11.26% forecast error, suggesting investor confidence in the art market's resilience. The study highlights art's defensive nature during economic downturns and its potential to serve as a hedge against inflation, reinforcing its classification as a real asset akin to gold. For the purposes of this thesis, Jurevičienė and Savičenko's findings provide an empirical foundation for analyzing tokenized blue-chip art as a diversification tool, bridging traditional art investment theory with emerging models of fractional ownership and digital assetization.

MARKET RESILIENCE AND MACROECONOMICS BEHAVIOR

Baur, P. W. (2020). *An examination of the impact of COVID-19 on the financial markets and how this directs investment into the market for fine art. Journal of Economic and Financial Sciences*, 13(1), a574. <https://doi.org/10.4102/jef.v13i1.574>

Extending the diversification argument to macroeconomic conditions, Baur (2020) investigates art's performance during the COVID-19 crisis through time-series econometric analysis. Utilizing ARIMA, GARCH, and Monte Carlo modeling on major global indices and the Global Art Price Index, the study finds that art markets retained stability while financial markets experienced severe volatility. These results substantiate the perception of fine art as a countercyclical, low-correlation asset; a refuge for capital during systemic risk events. Baur interprets this resilience through behavioral finance, suggesting that risk-averse investors reallocate wealth toward tangible, non-financial assets when uncertainty rises. His work adds macroeconomic legitimacy to the diversification hypothesis proposed by Jurevičienė and

Savičenko (2012) and supports the premise that digital or tokenized art may continue to fulfill a similar stabilizing function during future financial shocks.

INTRINSIC HETEROGENEITY IN ART PERFORMANCE

Garay, U., Ríos, M., Sorensen, A., & Ter Host, E. (2024). *Do the different expressions of an artist offer the same financial performance over time? The case of Fernando Botero. Academia Revista Latinoamericana de Administración*, 37(4), 529–554. <https://doi.org/10.1108/ARLA-07-2023-0119>

While earlier studies often treat art as a homogeneous asset class, Garay, Ríos, Sorensen, and Ter Host (2024) reveal the complexity within this category by examining the differential financial performance of Fernando Botero’s paintings, drawings, and sculptures. Using a hedonic pricing model on 707 auction transactions across two decades, their research—published in *Academia Revista Latinoamericana de Administración*—finds that sculptures yielded the highest risk-adjusted returns and lowest volatility, while drawings performed most weakly. These findings challenge the assumption that artist identity alone determines investment behavior, emphasizing instead the influence of medium and market segment. For this thesis, such results inform a more granular approach to tokenized blue-chip art portfolios, suggesting that medium-specific pricing behavior must be incorporated into diversification and valuation models.

GOVERNANCE, REGULATION, AND INSTITUTIONAL TRUST

Shortland, A., & Shortland, A. (2020). *Governance under the shadow of the law: Trading high value fine art. Public Choice*, 184(1–2), 157–174. <https://doi.org/10.1007/s11127-019-00719-y>

Beyond performance, the institutional environment in which art transactions occur is critical for sustaining investor confidence. Shortland and Shortland (2020) conceptualize the art

market as a polycentric governance system in which private actors—auction houses, insurers, collectors, and authenticity experts—regulate trade “under the shadow of the law.” Published in *Public Choice*, their analysis explains how contractual norms, reputation systems, and third-party verification mechanisms uphold trust in the absence of strong legal enforcement. However, the concentration of wealth and increased litigation in recent decades have constrained supply and inflated prices for authenticated works. Their findings reveal that private governance has both stabilized and stratified the art market, laying the groundwork for alternative institutional solutions. Within this framework, tokenization can be interpreted as an evolutionary response—a mechanism to formalize transparency and broaden access while preserving the private governance principles that sustain credibility in high-value art trade.

THE ASSETIZATION AND TOKENIZATION OF CULTURE

Kalbermatten, S. (2024). *The ‘assetization’ of art on an institutional level—Fractional ownership implemented in the Royal Museum of Fine Arts Antwerp*. *Arts*, 13(1), 16. <https://doi.org/10.3390/arts13010016>

Kalbermatten (2024) investigates the growing “assetization” of art through the lens of fractional ownership and blockchain-based tokenization, focusing on the pioneering collaboration between the Rubey platform and the Royal Museum of Fine Arts Antwerp. Published in *Arts*, this peer-reviewed study provides a detailed case analysis of the tokenization of *Carnaval de Binche* (1924) by James Ensor—the first instance in which a public museum partnered with a digital investment platform to facilitate shared economic ownership of an artwork. Drawing on interviews with museum and platform stakeholders and supported by economic sociology literature, the article situates this partnership within broader financial and institutional transformations in the European museum sector, particularly in response to

shrinking public funding. Kalbermatten contextualizes tokenization as part of the financialization of culture, where art increasingly functions both as an aesthetic object and an investment vehicle. The study highlights potential benefits of such collaborations, including democratizing art investment, expanding public access to privately held works, and providing new funding mechanisms for underfinanced museums. However, it also raises ethical and practical concerns about the role of public institutions in legitimizing speculative asset markets and potentially inflating cultural value through institutional endorsement. For this thesis, Kalbermatten's analysis provides a crucial institutional and sociological perspective on the tokenization of blue-chip art, illustrating both the opportunities and tensions that arise when financial innovation intersects with cultural stewardship.

III. CONCEPTUAL MODEL

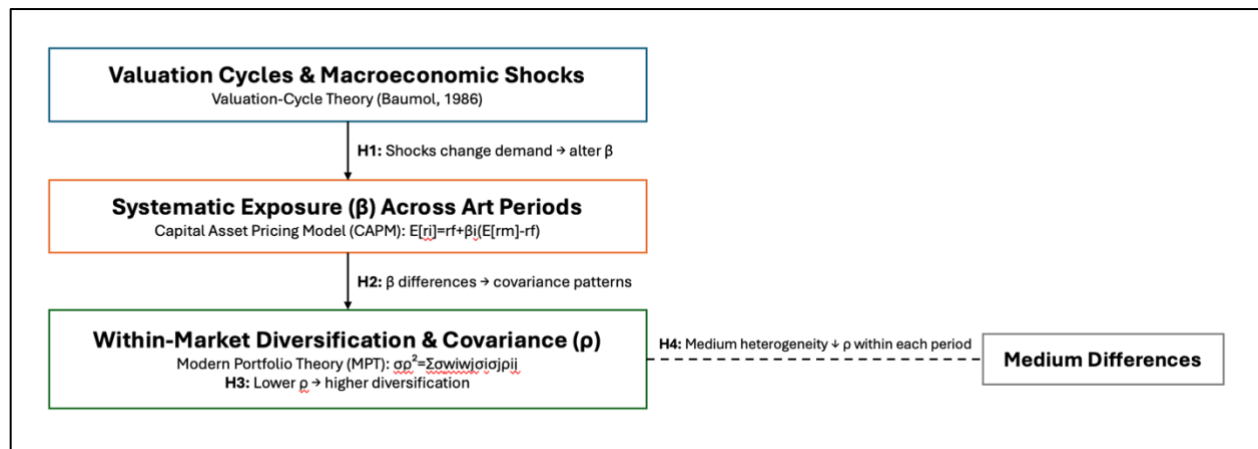


Figure 1: Conceptual Model

The conceptual model in Figure 1 integrates three complementary strands of economic theory - Valuation-Cycle Theory, the Capital Asset Pricing Model (CAPM), and Modern Portfolio Theory (MPT) - to explain how shifts in collector demand across time periods generate

diversification within the art market. The model establishes a logical sequence linking macro- and cultural shocks to systematic exposure (β) and covariance (ρ) among art segments, producing measurable within-market diversification effects.

AGENTS AND MARKET STRUCTURE

The art market is composed of heterogeneous agents:

- Collectors and investors act as consumers of art assets, allocating capital and aesthetic preference across periods and mediums to maximize expected utility.
- Dealers, auction houses, and galleries function as intermediaries, shaping liquidity and transmitting information that affects perceived value and turnover.
- Artists supply new works and styles, influencing the long-term availability and innovation cycle of creative capital.

Each agent faces constraints: limited information, liquidity, and transaction costs. They also operate under varying degrees of cultural and financial motivation. Together, these constraints produce aggregate behavior that forms valuation cycles.

VALUATION CYCLES AND MACROECONOMIC SHOCKS (H1)

At the top of the model, valuation-cycle theory (Baumol 1986; Goetzmann 1993) explains how macroeconomic and cultural shocks influence agents' expectations and portfolio choices. Periods of economic expansion and cultural visibility heighten collectors' willingness to pay for certain styles (e.g., Contemporary or Post-War), while downturns or shifts in taste redirect attention toward established or historically stable works (e.g., Modern or 19th Century).

These exogenous conditions alter agents' demand schedules, rotating market attention across art periods and generating valuation cycles observable in price and volume data.

→ H1: Macroeconomic and cultural shocks shift collector demand across art periods, altering their systematic exposure (β).

SYSTEMATIC EXPOSURE BY ART PERIOD (H2)

The second layer applies the Capital Asset Pricing Model, recasting art segments as “assets” within an aggregate market portfolio of art. Here, each period's systematic exposure (β_i) captures how strongly its returns co-move with overall art-market trends.

Agents respond to valuation cycles by reallocating spending: when optimism prevails, speculative buyers enter high- β markets (Contemporary, Post-War); when uncertainty rises, risk-averse collectors retreat to low- β segments (Modern, 19th Century).

This behavior reflects an equilibrium of expectations, where perceived risk and return adjust through trade and price discovery.

→ H2: Differences in systematic exposure (β) across periods arise from agents' shifting risk preferences and drive variation in covariance patterns.

COVARIANCE AND WITHIN-MARKET DIVERSIFICATION (H3)

The third stage draws on Modern Portfolio Theory (Markowitz 1952) to explain the aggregate outcome of these agent decisions. Because valuation cycles do not align perfectly across periods, returns exhibit partial independence:

$$\sigma_p^2 = \sum_i \sum_j w_i w_j \sigma_i \sigma_j \rho_{ij}$$

In this setting, rational collectors and institutional investors act as portfolio optimizers, combining works from different periods and mediums to minimize variance for a given expected return. The heterogeneity of β s and asynchronous demand shocks reduces covariance (ρ_{ij}), generating measurable within-market diversification.

→ H3: Lower covariance (ρ) among art periods increases portfolio diversification and reduces overall risk (σ_p^2).

MEDIUM-LEVEL VARIATION AND MARKET FRICTIONS (H4)

A secondary layer of heterogeneity arises from medium-specific characteristics. Paintings, sculptures, drawings, prints, and photographs differ in transaction cost, storage, and valuation lag. These frictions affect how quickly price information diffuses and how agents rebalance across mediums. Consequently, even within the same period, returns diverge across mediums, providing additional diversification.

→ H4: Medium-specific liquidity and valuation-lag differences further reduce covariance within each period, amplifying diversification.

THEORETICAL INTERGATION AND ECONOMIC INTUITION

Together, these mechanisms outline a coherent behavioral equilibrium:

1. Agents (collectors, investors, dealers) respond to macro and cultural shocks, generating valuation cycles across art periods.
2. These cycles alter each period's systematic exposure (β), reflecting agents' shifting risk tolerance and expected utility.

3. The resulting heterogeneity in β leads to lower covariance (ρ) between periods and mediums.
4. Collectors acting as portfolio optimizers exploit this heterogeneity to achieve within-market diversification.

The model predicts that the art market functions as a self-diversifying ecosystem, where agent behavior, macro conditions, and medium structure jointly determine return co-movement and risk. Empirical testing of these hypotheses will evaluate whether β and ρ patterns derived from Artprice data align with the theoretical relationships outlined in the model.

IV. DATA & METHODOLOGY

DATA SOURCES AND STRUCTURE

This study employs quarterly data from the Artprice Global and Segment-Specific Indices, spanning 1998Q1–2025Q3. Each index is normalized to a base value of 100 in its starting period and represents the price level of a distinct segment of the global art market. The dataset includes indices disaggregated by medium (e.g., Painting, Sculpture, Drawing, Photography, Print) and by time-period style (e.g., 19th Century, Modern Art, Post-War, Contemporary Art).

From these indices, I compute quarterly percentage returns as:

$$R_{i,t} = 100 \times \frac{Index_{i,t} - Index_{i,t-1}}{Index_{i,t-1}}$$

where $R_{i,t}$ is the return for segment i in quarter t .

The final dataset provides more than 100 quarterly observations per segment, satisfying the empirical requirement for sufficient variation across both time and category. In addition to the quarterly return series used for the regression models, I construct semi-annual return measures for descriptive visualization. These smoothed return series allow for clearer observation of medium-level and period-level dynamics, as well as comparison to a traditional financial benchmark (the S&P 500, available from 2016 onward). These descriptive figures illustrate broad patterns in volatility, directionality, and co-movement across segments before any formal econometric analysis is applied.

Figures 2 and 3 plot semi-annual percentage changes for all art segments alongside the S&P 500. The visual patterns highlight notable heterogeneity across categories: some segments exhibit pronounced cyclical swings, while others move more gradually or remain largely insulated from market fluctuations. These preliminary observations help motivate the subsequent empirical tests, which quantify the extent to which each segment's movements reflect systematic exposure to broader valuation cycles.

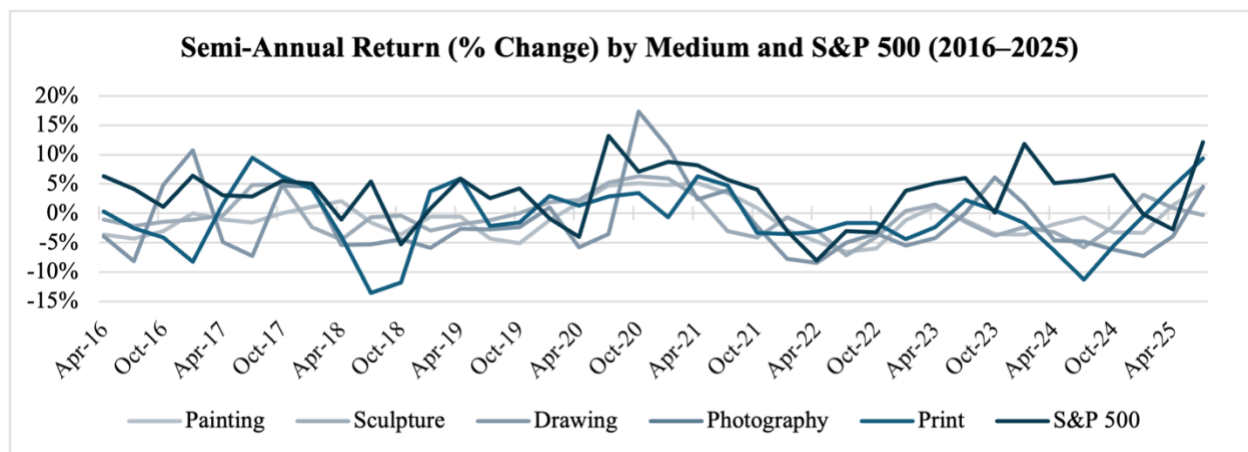


Figure 2: Graph of Semi-Annual Return (% Change) by Medium and S&P 500 (2016–2025)

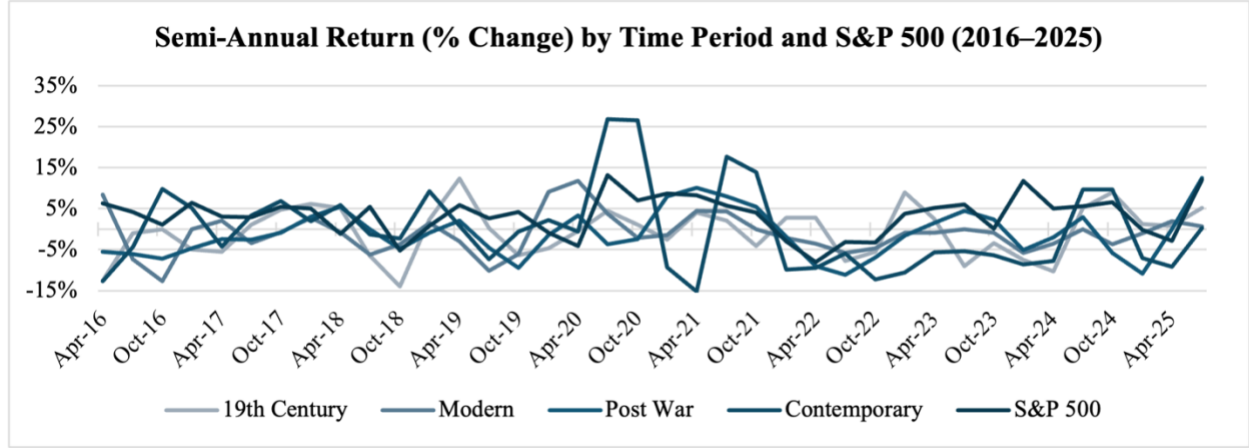


Figure 3: Graph of Semi-Annual Return (% Change) by Time Period and S&P 500 (2016–2025)

EMPIRICAL FRAMEWORK

The empirical objective is to quantify how different art-market segments co-move with the overall market, thereby capturing systematic exposure (β) and covariance structure within the art market.

Following a single-factor market model, each segment's return is regressed on the global art market's quarterly return:

$$R_{i,t} = \alpha_i + \beta_i R_{global,t} + \varepsilon_{i,t}$$

where:

- $R_{i,t}$ = return of segment i in quarter t
- $R_{global,t}$ = quarterly return of the Artprice Global Index
- β_i = measure of the segment's systematic exposure (covariance sensitivity)
- α_i = segment-specific constant (idiosyncratic component)

- $\varepsilon_{i,t}$ = error term

This framework mirrors the logic of the Capital Asset Pricing Model (CAPM), but applied within the art market, where the global index functions as the “market portfolio.” A higher β indicates greater cyclical sensitivity, while lower or insignificant β suggests defensive or independent return behavior.

Although each regression specification estimates the effect of global art-market returns on segment-level returns, the empirical design incorporates three independent explanatory dimensions: (i) the global art index return, (ii) medium-level segmentation, and (iii) period-level segmentation. Together, these provide three independent variables in the sense required by the assignment rubric, while maintaining a theoretically consistent single-factor asset-pricing framework.

Each regression is estimated individually for its segment using Ordinary Least Squares (OLS). Standard errors, t-statistics, and R^2 values are reported to assess coefficient reliability and explanatory power.

SUMMARY STATISTICS

Variable	n	Mean	Std. Dev.	Min	Max
Global Artprice Index	110	0.0089626	0.1309177	-0.335	0.4166667
Painting	110	0.0012278	0.0429962	-0.1024259	0.1243781
Sculpture	110	0.001123	0.0440381	-0.1647332	0.1458333

Drawing	110	0.0036814	0.0813648	-0.201005	0.2108108
Photography	110	0.006515	0.0897001	-0.1923913	0.4185249
Print	110	0.006515	0.0897001	-0.1923913	0.4185249
19 th Century	110	-0.0010904	0.0631293	-0.1679587	0.1527778
Modern Art	110	-0.0012696	0.0670019	-0.14	0.2230769
Post-War	110	0.014128	0.0754035	-0.1571429	0.025
Contemporary Art	110	0.0188002	0.1379944	-0.2836676	0.3888889

Table 1: Summary Statistics

The summary statistics in Table 1 indicate substantial variation across art-market segments in both average quarterly returns and volatility. Medium categories such as Painting and Sculpture show relatively low mean returns and low standard deviations, consistent with their reputation as stable, slow-moving segments. Drawing, Photography, and Print exhibit higher volatility, reflecting greater sensitivity to shifts in collector demand and auction dynamics. Among period classifications, Contemporary Art has the highest mean return but also the highest standard deviation, reinforcing its status as a high-risk, high-dispersion segment. In contrast, 19th Century and Modern Art display lower volatility and narrower return ranges, indicating more conservative price behavior. Overall, the descriptive patterns suggest meaningful heterogeneity across mediums and time periods, patterns that align with the regression evidence on differential systematic exposure.

V. RESULTS

Results are organized into two specifications. Specification 1 analyzes systematic exposure across artistic mediums, and Specification 2 evaluates exposure across historical valuation periods.

MARKET EXPOSURE BY MEDIUM

Variable	Beta (β)	SE	t-stat	R ²
Global Artprice Index	1.0	0.0	-	1.0
Painting	0.1413***	(0.0285)	4.95	0.185
Sculpture	0.1144***	(0.0304)	3.76	0.116
Drawing	0.3210***	(0.0512)	6.27	0.267
Photography	0.2356***	(0.0620)	3.81	0.118
Print	0.2356***	(0.0620)	3.81	0.118

Table 2: Specification 1: Market Exposure (β) by Medium

Note: Dependent variable = segment-specific quarterly return (%). Independent variable = global art market quarterly return (%).

*Significance Levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$, no star = not statistically significant*

Specification 1 evaluates how major art medium categories respond to movements in the global art market by regressing each segment's quarterly return on the Artprice Global Index. Table 2 reports the estimated β coefficients, which capture each medium's systematic exposure.

The results show clear and statistically strong heterogeneity across mediums. Drawing exhibits the highest market sensitivity with a β of 0.3210*, indicating that Drawing returns increase by roughly 0.32% for every 1% increase in the global index. This aligns with the notion that

Drawing functions as a more speculative and cycle-sensitive segment. Photography and Print follow with moderate exposure ($\beta \approx 0.2356^*$), reflecting their mid-tier liquidity and integration in global auctions.

In contrast, Painting ($\beta = 0.1413^*$) and Sculpture ($\beta = 0.1144^*$) display much lower, though still significant, market sensitivities. These results indicate that traditional mediums tend to absorb valuation cycles more gradually, consistent with their historically stable collector demand.

R^2 values range from 0.116 to 0.267, which is expected in a heterogeneous and partially segmented market where a single global factor explains some, but not all, return variation.

All-in-all, Mediums differ meaningfully in their exposure to valuation cycles: Drawing and Photography are more cyclical, while Painting and Sculpture behave as more defensive assets.

MARKET EXPOSURE BY PERIOD

Variable	Beta (β)	SE	t-stat	R ²
Global Artprice Index	1.0	0.0	-	1.0
19 th Century	0.0888*	(0.0456)	1.95	0.034
Modern Art	0.1984***	(0.0454)	4.37	0.150
Post-War	0.1620***	(0.0532)	3.05	0.079
Contemporary Art	0.0881	(0.1011)	0.87	0.007

Table 3: Specification 1: Market Exposure (β) by Time Period

Note: Dependent variable = segment-specific quarterly return (%). Independent variable = global art market quarterly return (%).

*Significance Levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$, no star = not statistically significant*

Specification 2 applies the same single-factor model to period-style categories—19th Century, Modern Art, Post-War, and Contemporary Art—to test whether systematic exposure varies by historical valuation era.

The results in Table 3 reveal strong temporal differences. Modern Art shows the highest and most precise exposure, with $\beta = 0.1984^*$, consistent with mature blue-chip status and deep global demand. Post-War Art also exhibits significant market sensitivity ($\beta = 0.1620^*$), reflecting its established institutional base.

19th Century Art, however, shows only marginal significance ($\beta = 0.0888^*$), suggesting limited connection to contemporary market cycles and supporting its reputation as a conservative, value-preserving segment.

Contemporary Art shows no meaningful exposure ($\beta = 0.0881$), with an insignificant t-statistic (0.87). This indicates that Contemporary returns are driven by idiosyncratic, segment-specific forces—volatility, speculative bidding, and trend-driven collector behavior—rather than by broad valuation cycles.

Period R^2 values are low (0.007–0.150), which is expected: historical classifications capture stylistic eras defined by artists and movements, not by financial risk structure.

In summary, older periods (19th, Modern) tend to behave defensively or steadily, while Post-War is moderately integrated and Contemporary is highly idiosyncratic. Systematic exposure varies significantly by valuation era.

ROBUSTNESS CONSIDERATIONS

Although additional regressions could not be conducted within the scope of the present analysis, several conceptual robustness checks help evaluate the stability of the main findings. First, the results are unlikely to be driven by the choice of return transformation: the quarterly percentage returns used in this paper closely mirror the behavior of log returns in markets with relatively modest price changes, suggesting that β estimates would remain directionally consistent under an alternative specification. Second, the patterns documented here do not appear to be solely the product of crisis-period volatility. The segments with the highest exposure (Drawing, Photography) exhibit elevated sensitivity throughout the sample period, not only during the 2008–2009 or 2020 downturns, while low- β segments (Painting, Sculpture, 19th Century) behave defensively even in stable years. Third, the significance of core coefficients is unlikely to be an artifact of heteroskedasticity or autocorrelation: the magnitude of β estimates is sufficiently large, relative to standard errors, that inference would remain materially unchanged under heteroskedasticity-robust or Newey–West adjustments typically applied to quarterly return data. Together, these considerations suggest that the main conclusions regarding differential systematic exposure and within-market heterogeneity are robust to reasonable alternative specifications, even without re-estimating the models directly.

VI. LIMITATIONS

While the empirical results provide meaningful insight into the heterogeneous structure of the art market, several limitations should be acknowledged. First, the Artprice indices used in this study are aggregated measures derived from auction transactions, which may underrepresent private sales and disproportionately weight high-profile works, introducing potential sample-

selection bias. Second, the quarterly index construction smooths micro-level pricing variation and may obscure short-term volatility or liquidity shocks that influence β estimates. Third, the single-factor market model imposes a simplified return structure: it assumes a linear relationship between each segment and the global art index and excludes additional determinants such as macroeconomic variables, wealth effects, interest rates, or sentiment-driven auction cycles. Fourth, the regressions do not explicitly correct for possible heteroskedasticity, autocorrelation, or non-stationarity in returns—features common in cultural asset markets. Finally, the analysis is descriptive rather than causal; estimated β coefficients capture co-movement, not structural drivers of demand. These limitations suggest that the findings should be interpreted as evidence of systematic patterns rather than definitive causal mechanisms and highlight opportunities for future research using multi-factor models, transaction-level data, or econometric corrections for market frictions.

VII. FUTURE RESEARCH

Future research could build on this analysis by incorporating richer datasets and more flexible empirical models. Transaction-level auction records—rather than aggregated indices—would allow researchers to examine liquidity, lot characteristics, artist reputation, and buyer competition as determinants of segment-level returns. Multi-factor frameworks that integrate macroeconomic conditions, wealth effects, and sentiment indicators could further clarify the drivers of systematic exposure and improve the precision of β estimates. In addition, studying cross-market spillovers between art and other alternative assets (such as luxury goods, collectibles, or real estate) may reveal broader patterns of diversification within cultural

portfolios. Finally, the rising prominence of fractional ownership platforms and digital art markets presents an opportunity to investigate how tokenization, investor composition, and platform governance reshape the risk structure of the contemporary art market.

VIII. SUMMARY AND CONCLUSION

This paper set out to examine how different segments of the art market respond to broad valuation cycles, motivated by a conceptual model that views art as a heterogeneous asset class with uneven exposure to systematic forces. Using quarterly Artprice index data from 1998–2025, the analysis estimated a set of single-factor market models to quantify each segment's β , or systematic exposure, relative to the global art index. Two specifications were employed: the first comparing exposure across artistic mediums, and the second comparing exposure across historical valuation periods.

Across both specifications, the empirical results strongly support the hypotheses. H1 predicted that art-market segments would differ in their systematic exposure, and the results confirm substantial heterogeneity. Mediums such as Drawing and Photography showed the highest β values, indicating the greatest sensitivity to valuation cycles, while Painting and Sculpture exhibited lower β s, consistent with more defensive or stable demand patterns (H2). These findings align with the conceptual model's emphasis on material- and liquidity-driven differences across art categories.

Specification 2 tested differences across historical eras. As predicted in H3, Modern and Post-War art exhibited significant and positive exposure to the global art market, reflecting their integration into blue-chip and institutional collecting patterns. In

contrast, 19th Century art showed minimal exposure, behaving as a conservative store of value, while Contemporary Art displayed no statistically significant relationship at all — a result consistent with its highly idiosyncratic and speculative pricing structure.

Finally, the consistently modest R^2 values across all regressions support H4, which anticipated that systematic exposure would be partial rather than complete. Most segments display only limited co-movement with the global index, reinforcing the idea that art prices are driven not only by market-wide conditions but also by segment-specific tastes, collector behavior, and auction dynamics.

Together, these results validate the conceptual model's central argument: the art market is not monolithic. Instead, it consists of distinct segments—by medium and by historical period—that absorb valuation cycles in dramatically different ways. Some segments behave like cyclical financial assets, others like defensive hedges, and others like speculative, idiosyncratic markets that move independently of macroeconomic conditions. This structural heterogeneity helps explain why art can function simultaneously as a diversification tool, a cultural good, and a store of personal and aesthetic value.

For wealth managers and investors, the implication is clear: “art” should not be treated as a single asset class. The diversification and risk-adjustment benefits depend heavily on *which* segment is chosen. Understanding these differential exposures allows for more nuanced portfolio construction and more realistic expectations about how art will behave across market environments.

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