

Gaining and sustaining legitimacy in the art market in the digital era

By

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A thesis submitted in fulfillment of requirements for the degree of Doctor of Philosophy in Business and Management

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University of South Australia

Adelaide, Australia

27 January 2025

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Glossary of Abbreviations

COVID-19

Coronavirus Disease 2019 caused by the virus Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).

eWOM

Electronic word of mouth. The comments from social media posts.

NFT

Non-Fungible Token. An NFT is a unique digital asset that represents ownership of a specific item or piece of content, such as art, music, videos, or virtual goods, and is stored on a blockchain.

MPT

Modern Portfolio Theory. Modern Portfolio Theory is a financial framework developed by Harry Markowitz that aims to optimize the balance between risk and return in an investment portfolio.

WTO

World Trade Organization. The WTO is an international organization that regulates global trade between nations.

Summary

The thesis is constructed with a combination of conventional chapters and published papers.

The study investigates how auction houses and online art securitization platforms achieve legitimacy with art investors in the digital era. The emergence of disruptive technologies challenged traditional art market intermediaries, such as auction houses, to conduct digital transformation by initiating online auctions, organizing live stream auctions, and constructing blockchain-based datasets. However, the effectiveness of digital transformation in gaining and sustaining auction houses' legitimacy has been overlooked. Beyond digital transformations that occurred in auction houses, technology advancements have enabled novel intermediaries of art distribution to emerge, such as art securitization platforms. Art securitization platforms are new ventures in the art market that leverage blockchain technology to enable fractional ownership of art, thereby increasing liquidity and accessibility for online investors in art trading. As new ventures entering the long-standing art market, art securitization platforms need to establish legitimacy among investors to achieve a primary source of stability, and to survive in the art market. Yet, how investors perceive art securitization platforms has been overlooked, and the performance of art securitization platforms in facilitating art investment remains to be explored. To fill in this gap, this study addresses the research question: how do auction houses and art securitization platforms achieve legitimacy from art investors in the digital era?

The thesis consists of five chapters, including an introduction and a conclusion chapter, and three published papers. This first chapter introduces the characteristics of the art market, reviews the evolution of art investment studies, and provides an overview of art auction houses and art securitization platforms.

The second chapter presents an article entitled *Sustaining legitimacy in the digital era: A case study on Sotheby's auction house*. The study adopts the only ever-publicly-listed

auction house, Sotheby's, as a case to investigate how art auction houses leverage digital transformation to overcome legitimacy challenges (i.e., the price-fixing scandal, transparency and accountability issues). The study conducts a longitudinal content analysis on Sotheby's annual reports between 1988-2018 (when it was publicly listed) to analyse Sotheby's legitimacy-sustaining approaches. After Sotheby's went private and annual report is unavailable in the public domain, supplementary media reports between 2019-2023 are adopted. The study identifies three ways of sustaining legitimacy in the auction house: enabling online transactions; establishing professional and accountable identity; and partnering with technology-driven new ventures as three effective approaches.

The third chapter presents an article entitled *Leveraging entrepreneurial identity and technology: Legitimacy of art securitization platforms*. This study investigates four leading art securitization platforms, *Maecenas*, *Masterworks*, *Otis* and *Artory*, that have engaged with investors on social media. The study analyses art securitization platforms' 6,306 social media posts to decode their legitimacy-achieving approaches, and examined the positivity of 2,510 post comments to measure how their legitimacy is perceived by investors. The findings suggest that highlighting technological distinctiveness and entrepreneurial identity aid art securitization platforms in achieving legitimacy, despite raising concerns among conservative investors. Legitimacy judgements are also given to platforms that conform to stakeholders' expected levels of return, transparency, and security in art transactions.

The fourth chapter includes a book chapter that further investigates the pragmatic legitimacy of an online art securitization platform, *Masterworks*. The paper is entitled *Are art investors rational? Investor sentiments and art returns*. Applying investor sentiment theory, the study examines the association between investors' sentiment and returns in the art securitization market. Drawing on 16,149 art share transaction from a case art securitization platform *Masterworks,* the study conducts ordinary least squares regression to examine the

impact of two investors' sentiments (investors' confidence and fear of COVID-19 pandemic) on returns in the art securitization market. The findings reveal a significant positive, yet small, association between art investors' confidence and art returns. Investors' reaction to the COVID-19 pandemic is similarly mirrored in art share returns. In addition, when considering investor sentiments, the findings do not signal any association between returns in art and stock markets, providing further evidence of art as a "safe-haven asset" during a crisis.

The last chapter outlines the implications of the key findings to art market academics and practitioners and acknowledges the limitations of the study. The study's three original contributions to legitimacy theory are outlined, followed by suggested directions for future art market studies.

Statement of Originality

I declare that: this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, is clearly acknowledged.



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Authorship Attribution Statement

The thesis is constructed with a combination of conventional chapters and published papers. Appendix 1 includes statement of authorship signed by co-authors of each published article, with information to confirm my significant contribution of each paper. The thesis contains materials that have been accepted for publication. I had made a substantial contribution to the accepted papers, and I am the corresponding author of those papers.

Chapter two of the thesis is a working paper titled Maintaining legitimacy in the digital era: The case of Sotheby's. I designed the study, collected and analysed the data, and wrote and revised the drafts of the manuscript.

Chapter three of the thesis is a refereed journal article, accepted as Liu, Lee, & Rentschler, (2025). Leveraging entrepreneurial identity and technology: Legitimacy of art securitization platforms. *Journal of Cultural Economics*. I designed the study, extracted the data, and wrote and revised the drafts of the manuscript. I analysed the data with the co-authors.

Chapter four of the thesis is accepted to be published as a book chapter by Liu, Lee & Rentschler. Are art investors rational? Investor sentiments and art returns. In E. Lazzaro, Moureau & Turpin (Eds.), *Law and Finance in International Art Markets: Past and Present*. Routledge: London. I designed the study, collected and analysed the data, wrote the drafts of the manuscript. I reviewed and revised the drafts with the co-authors.

Acknowledgements

This thesis was written with a great deal support from Professor Ruth Rentschler, Dr Boram Lee, Dr Frank Huo, and Associate Professor Ryan Tang, my supervisors, who gave me the opportunity to commence the PhD and provided ongoing mentorship through the process. My deepest thanks go to my principal supervisor, Professor Rentschler, for generously sharing her rich knowledge of the thesis supervision process and of her deep and long research history in the arts management field. She provided prompt and thoughtful feedback to me throughout my thesis journey. I am especially thankful to Dr Lee for her insightful feedback on my research, using her knowledge of cultural economics and finance. Dr Lee created a warm atmosphere when we work, making all things that were difficult easier to understand. My heartfelt thanks also go to Dr Huo and Associate Professor Tang who provided not only valuable insights about the thesis design, but also ongoing encouragement and mentorship on the academic journey. I will always remember that my first step towards the academic world was led by my four supervisors. I wish to take this opportunity to say that I have always been grateful and proud to have you as my supervisors.

I am deeply grateful to my parents for their unwavering love, support, and belief in me throughout this journey. Your constant encouragement and many sacrifices have been my greatest source of strength. Thank you for always standing by my side, celebrating my successes, and lifting me up during challenges.

My heartful thanks go to my office mates, Hansi, Nick, Raman, and Mehmet, who provided countless moral support along my PhD journey. I remember days having great laughs together with Hansi; having insightful discussions on sustainability with Nick; having snack and coffee chats with Raman; and getting thoughtful advice and support from Mehmet. I feel incredibly fortunate to have shared this experience with such amazing friends. They brought so much joy to the office.

I want to express my heartfelt love and thanks to my beloved furry friend, Su Su for his unwavering companionship. To my furry companion, thank you for being a source of comfort and joy, always by my side with your gentle purrs and calming presence. My cat was by my side every day, sitting on my laptop as I worked. Heartfelt thanks to my partner, Bryan, for endless patience, love, understanding, and mental support from overseas. Together, you both have made this journey so much brighter and more meaningful, despite the distance in the case of my partner.

I sincerely thank the BIS-Research staff at UniSA for their support, guidance, and kindness. Your assistance and dedication have made a meaningful difference, and I deeply appreciate all that you have done to help me along the way. I particularly wish to thank Cathie Bloxham, who dedication to PhD students is well-known.

My PhD was supported by a UniSA Business Scholarship and Tuition Fee Waiver. These financial supports enabled me to complete this journey without financial hardship. I am truly grateful for the financial support.

Research Output

Journal Article

Liu, J., Lee, B., & Rentschler, R. (2025). Leveraging entrepreneurial identity and technology: Legitimacy of art securitization platforms. *Journal of Cultural Economics*. https://doi.org/10.1007/s10824-025-09529-1

Book Chapters

Liu, J., Lee, B., & Rentschler, R. (Accepted). Are art investors rational? Investor sentiments and art returns. In E. Lazzaro, N. Moureau & A. Turpin (Eds.), *Law and Finance in International Art Markets: Past and Present*. Routledge: London.

Rentschler, R. & Liu, J. (2023). Methods and methodologies in ACM research: A review and research agenda. in *The Oxford Handbook of Arts & Cultural Management*. Oxford University Press, 1–17.

Conference Presentations

Liu, J., Rentschler, R., & Lee, B. (2024). Masterpieces at the price of a McDonald's meal: The cognitive legitimacy of art securitization platforms. In 7th Annual Conference of The International Art Market Studies Association: Multiple Art Markets in an Expanding World: Artists, Agents, Networks, Exchange, [10–13 July 2024].

Liu, J. & Rentschler, R. (2023). Is art an alternative asset for everybody? Art auction vs art securitization. In the 22nd International Conference of Cultural Economics, [27–30 June 2023].

Liu, J. & Rentschler, R. (2023). Are art investors rational? When investor sentiments capture art market fluctuations. In the 22nd International Conference of Cultural Economics, [27–30 June 2023].

Liu, J. & Rentschler, R. (2022). Evolution of research methods in arts management studies: A selective literature review. In 17th International Association of Arts and Cultural Management, [23–26 June 2022]

Chapter 1 Introducing the art market study

1.1 Introduction

The study investigates how auction houses and online art securitization platforms achieve legitimacy from investors in the art market in the digital era. Legitimacy is a "generalized perception or assumptions that the actions if an entity are desirable, proper or appropriate" (Suchman, 1995, p. 574). Art securitization platforms are new ventures in the art market that leverage blockchain technology to enable fractional ownership of art, thereby increasing liquidity and accessibility for online investors in art trading. On an organizational level, stakeholders are likely to support resources for organizations that appear legitimate (Crilly, Zollo & Hansen, 2012).

In this study, legitimacy is adopted as the analytical lens for three reasons. First, legitimacy has a long history of being an important explanatory category for social science (see, for e.g., Weber, 1918), underpinning intermediaries' ability to access scare resources of artwork and capital. While there is a seemingly unlimited supply of contemporary artworks, contemporary art has been deemed "cutting-edge" with "low unit and negative investment value" (Robertson, 2005, p. 15). Many contemporary artworks traded online (i.e., via eBay) are more consumption goods and "sofa art" with no investment value (Highfill & O'Brien, 2007). Only top-end artworks created by renowned artists (i.e., Picasso, Matisse, and Manet) can generate financial returns and hedge risk in an investment portfolio (e.g., Stein, 1977; Singer & Lynch, 1997; Korteweg, Kraeussl & Verwijmeren, 2016). As a consequence, art investors are "very conservative" and prefer to "pay for quality" (Reid, 2004, p. 251), with art intermediaries that appear legitimate and trustworthy to secure exclusive artworks and attract investors. Despite market studies being devoted to artwork pricing and return on art

investment (i.e., Mei & Moses, 2002; Frey, 2019), investigations into intermediary legitimacy remain limited.

Second, legitimacy assists established intermediaries to withstand and recover from crisis. For established organizations, achieving legitimacy is not a once-in-a-lifetime effort. Stakeholders' legitimacy judgment can change rapidly, requiring established organizations to sustain legitimacy to remain competitive (Nguyen, Corley & Krantz, 2014). When facing industrial transformation and crisis, legitimacy assists hybrid organizations to establish congruence with values with different stakeholders (Gulbrandsen, 2011), avoid crimes and transnational corporate bribery (Lord, 2016), and re-establish themselves after stigmatization (Burke, 2020). In the digital era, price-fixing scandals and opaque auction procedures have called into question the appropriateness of auction houses as suitable market actors. Hence, this study adopts a legitimacy lens to investigate how established intermediaries can sustain legitimacy and remain competitive.

Third, for new ventures lacking historical operation records, legitimacy provides an alternative source for survival (Selznick, 1948). For new technology driven ventures, surviving in the art market is not a simple task. The emergence of blockchain technology is influencing the way artworks are traded and consumed, intensifying competition in the art market (Massi et al., 2020). New ventures leverage novel technologies to enable art consumption, aiming to address art investors' demand of more affordable, transparent, and democratized investment channels. Art securitization platforms, for instance, apply blockchain technology to securitize art ownership in the form of art shares. Each art share represents fractional art ownership, and is purchasable and tradeable online. Non-fungible token (NFT) marketplaces, such as OpenSea and Bored Ape, use blockchain and Ethereum technologies to enable the creation, verification, and ownership transformation of various types of digital art. Despite such new ventures lacking historical performance, the

establishment of legitimacy is an intricate process that unfolds overtime. Legitimacy functions as an alternative measure to convey the venture's appropriateness (Fisher, 2020).

Fierce competition induced by novel agents is driving former art market gatekeepers to digitally transform their businesses, exploring innovative business models. Art galleries establish online stores to expose artworks to broader audiences and investors (Lee & Lee, 2017), while auction houses such as Sotheby's and Christie's, are streamlining authentication and valuation with artificial intelligence, conducting online live auctions, and displaying artworks with virtual and augmented reality to engage art investors (Bourron, 2021).

Hence, this study answers the research question: How do established and novel organizations in the art market, in the era of digital transformation, at different stages in the business cycle determine their legitimacy for art investors? To address the research question, the study is structured around three published papers, adopting the art auction house Sotheby's as an instrumental case of established organizations, and art securitization platforms as cases of technological-driven new ventures. It also includes this introductory chapter and a concluding chapter.

The rest of this chapter is structured as follows: The next section outlines the motivation for the study, followed by a high-level overview of the art market and art as an investment. Then it outlines the methodological approach used in the study, followed by the contribution of the study, the three published papers in it and finally the conclusion to the chapter.

1.2 Motivation for this study

In the long-established art market, despite such organizations having access to "privileged categories, definition, and accounts", established firms face the stress of needing to change in order to protect their accomplishments (Suchman, 1995, p. 590). When environment jolts

occur, a long-standing organization can survive by sustaining legitimacy (Elsbach, 1994) or collapse due to the failure to sustain legitimacy through external crises (Samdanis & Lee, 2019). The recent history of the art market, including the evolution of investor demand, and the emergence of technology-driven art trade channels, emphasises the need for existing organizations to be more aware of, responsible for, and capable of conducting digital transformation and gaining favourable investor judgments (e.g., Sánchez-González & González-Fernández, 2021; Yeo et al., 2022). Thus, the first motivation of the thesis is to investigate how established organizations in the art market sustain legitimacy in the digital era, in order to survive and gain resource. In particular, this thesis focuses on how Sotheby's, one of the former art market dominators, conducts digital transformation in order to sustain legitimacy after illegal actions surfaced (i.e., scandals over price-fixing; challenges to their authenticity; a provenance controversy; tax evasion; and scandals over customs violations) (Deephouse, 1996).

The second motivation of this thesis is to observe the phenomenon of how new digital ventures in the art market are perceived differently. While some technology-driven new ventures are perceived as pioneers of innovation and attracts novelty-seeking investors, others' technology applications are being questioned and are suspect. In particular, to be viewed as acceptable and appropriate, the literature suggests two divergent approaches to achieving legitimacy: conformance to norms and conveying distinctiveness. Conformance to norms entails "not question, change, or violate existing structures", but rather "follows the rules" (Suchman, 1995, p. 594). Conveying distinctiveness means being distinctive from their peers to stand out (Taeuscher, Bouncken & Pesch, 2021). In the art market, some new ventures "follow the rules" to partner with established organizations (Girschik, 2020), conform to stakeholder expectations, such as investors' expected levels of investment return (Henisz & Zelner, 2005), and take advantage of the knowledge and resource spillover in the

industry (Jolly & Hansen, 2022) to create alignment with art market norms. By contrast, other ventures offer novel products and services that shock, violate, and contradict existing norms. These ventures aim to achieve "optimal distinctiveness" (Taeuscher, Bouncken & Pesch, 2021) by adopting novel technology (Elston & Audretsch, 2011), thus forming distinct entrepreneurial identities (Fauchart & Gruber, 2011).

In the art market, technologically driven new ventures face this dilemma of whether to conform to market norms (i.e., partner with auction houses, engage in industrial conferences and events) or to disclose their unique and distinct identity. Further, the effectiveness of both a legitimacy-achieving approach in attracting and conveying art investors remains unexplored. This thesis aims to fill this lacuna by investigating the legitimacy achieving efforts used by art securitization platforms. The thesis adopts four art securitization platforms as instrumental cases of technology-driven new ventures, recording and decoding how each platform gains legitimacy, and evaluates investors' perceptions and judgments towards each platform, to reveal effective legitimacy-achieving approaches.

The third motivation of this thesis is to evaluate pragmatic legitimacy of technology-driven new ventures in the art market. From an organizational perspective, new ventures need to be viewed as legitimate to survive in the art market and "open up otherwise unavailable opportunities" (Becker, 1982, p. 6). Art investors, in essence, invest in artworks to minimize the risk or reach the expected return of an investment profile (Francis & Kim, 2013). Therefore, the return on artwork investment is applied as a measure of pragmatic legitimacy, particularly in times of crisis and financial downturns. While a large body of literature has assessed the investment return of artworks as calculated with auction data (e.g., Mei & Moses, 2002; Campbell, 2008), and revealed the price determinants of artworks (e.g., Collins, Scorcu & Zanola, 2009; Lee & Veld-Merkoulova, 2011), returns of artworks traded through technology-driven art businesses for investors have not yet been investigated. This thesis

adopts *Masterworks*, a novel art securitization platform, as an instrumental case to assess how art share return is associated with the stock market and investor sentiments.

1.3 The Art Market

"When an artwork is created, it needs to be distributed through a mechanism which gives people with the taste [for] it and simultaneously will replay the investment of time, money, and materials in the work in the form of monetary return".

- Art worlds, Becker, 1982, p.93

In his pioneering book *Art Worlds*, Becker's (1982) argued that artworks are not the creation of isolated individuals, but result from cooperation between different artists, material suppliers, art distributors, critics and audiences, who together make up the art world. Over the last few decades, the spectacular growth in both value and volume in the art market has inspired the emergence of new research disciplines, such as cultural economics, which examine the selling and consumption of fine arts through intermediaries (Baumol, 1986; Baumol, Towse, & Navarrete Hernández, 2020; Frey, 2000). This thesis studies intermediaries in the art market, centring on auction houses and online art securitization platforms. In light of existing art market studies, the following section reviews the art market, its online evolution, and artwork as an investment.

1.3.1 Primary and Secondary Art Market

It is inevitable that when fine art is created and made available, a distribution system forms around it, and a market appears to confer value onto artworks. This market of artworks is defined as "a place where cultural goods become a commodity" (Moulin, 1987, p. 3). In accordance, the selling and consumption of artworks have been deemed to be "distributing works to audiences in return for some form of payment" (Becker, 1982, p. 3), and "acquiring [art as] a tangible consumption good with social capital" (Robertson, 2005, p. 3).

Since the 1990s, the art market literature has expanded into nuanced subdivisions, and has been delimited by criteria including regions, historical periods, and distribution channels. Classified by regions, studies have assessed art markets by continents and nations, such as Europe (e.g., Montias, 2002; Olsburgh, 2005; Herrero & Santoro, 2011; Lucinska, 2015); Africa (e.g., Fedderke & Li, 2020); Asia (e.g., Hawkins & Saini, 2016; Reyes, 2019; Molho, 2021); the US (e.g., Erdős & Ormos, 2010; Taylor, Cardenas & Edwards, 2019) markets. Classified by historical periods, studies have examined the performance of Old Masters (Lyna, 2012), modern art (Candela & Scorcu, 1997; Adam, 2014), and contemporary art (Thompson, 2010; Horowitz, 2011). Classified by distribution channels, Becker (1982) identified three types of channels in his pioneering study, including self-support; patronage; and public sale. Self-support involves artists independently funding and managing their own creative art, patronage is characterized by financial or material support provided by a patron, while public sale analysed in this study refers to art sales in a public commercial market.

Beyond the above-mentioned criteria, art market studies separate the marketplace into distinct trading levels: primary and secondary. The primary art market trades work that "appear on the open market for the first time" (Robertson, 2005, p. 18), while the secondary art market is a place "in which all the subsequent resales occur" (p. 21). In practice, the secondary art market has been widely acknowledged as a highly segmented market dominated by large auction houses (Bulow & Klemperer, 2009; Ashenfelter et al., 2020), namely Sotheby's and Christie's, despite the recent emergence of their online competitors. The primary art market entails the initial sale of artwork s by artists. Therefore, it is outside the scope of this study due to its opacity, lack of data, and fragmented structure.

1.3.2 The Online Art Market

Since Sotheby's first online art auction in 1999, recent decades have witnessed an increasing application of internet technology in the secondary art market, especially in auction houses.

In art market studies, however, the phenomenon of adopting the internet as a disruptive innovator has been overlooked (Sidorova, 2019). While early studies deemed the internet as an instrument of arts marketing (Bailey & Gardiner, 2010; Adam, 2011), a growing corpus of recent studies perceive the online art market as a separate market unit, defining the market as "an apart-standing art market segment with unique features and development patterns" (Sidorova, 2019, p. 84).

Three unique features of the online art market include: efficient information diffusion (Brewster, 2006; Robertson, 2011); broader audience base (Adam, 2014); and greater transparency (Coslor, 2016, Tompkins, 2016, Prieto-Rodriguez & Vecco, 2021), each explained in this paragraph. In a virtual context, artwork information displayed online can attract potential customers who "hesitate about entering [an] art gallery to educate themselves before buying" (Adam, 2014, p. 122), which expands art intermediaries' reach to manifold new buyers to grow the market. Further, the online art market has the capacity to provide minimal personal contacts (Vickers, 2005), with some arguing that it may prevent crime (Tompkins, 2016), and remove social barriers (Gilkes & Tennant, 2014). The online context enables a marketplace in which "a certain status and wealth" (McLean, 2008) and "transactions through a central authority" (Rosenberger, 2018) are no longer required from art investors.

Beyond these features, the impact of virtual technology on art market relations has been assessed. In the art market, online technologies led to "a paradigm shift in art trade and mediation" (Sidorova, 2019) and generated "novel structures for art businesses" (Hackforth-Jones & Robertson, 2013). Beyond the art market, online technologies facilitated the integration between art sectors and other industries (McAndrew, 2010). In particular, the integration between art and finance was viewed optimistically (Quattrocchi & Strati, 2014; Frey, 2019). Hackforth-Jones and Robertson's (2013) investigation of multiple online art

businesses, for instance, revealed that such interdependencies between art, technology and commerce are attractive to prospective collectors and investors.

1.4 Art as an Investment

"It's the restricting of the hows, wheres and whos that shaped that art world until now."

- Who's afraid of contemporary art?, An & Cerasi, 2017, p. 121

1.4.1 Why Invest in Art

Art has been widely defined as an alternative asset that does not fall into the conventional investment categories of bonds, stocks, and cash equivalents. Investors purchase art due to its ability to diversify a portfolio, effectively hedge risk, and provide unique aesthetic value.

In light of modern portfolio theory (MPT), art investment has long been defined as a worthy asset in an investment portfolio. Developed and refined by Markowitz (1952, 1971), MPT defines how risk-averse investors construct portfolios to maximize expected returns based on a given level of market risk. Alternatively, MPT inspires construction of a portfolio that minimizes risk for a given level of expected return. The theory has underlined the importance of portfolio diversification in financial investment (Francis & Kim, 2013).

Beyond finance studies, MPT's core concept of "minimizing the cost or risk of the portfolio" (Swamy, 2013, p. 84) has inspired studies across multiple disciplines, including in physics (e.g., Huang & Wu, 2008; de Llano-Paz et al., 2017); engineering (e.g., Shin & Park, 2018); geography (e.g., Ando & Mallory, 2012; West et al., 2021), and most recently, in cultural economics (e.g., Öztürkkal & Togan-Eğrican, 2020). The effectiveness and rationale of including alternative assets, such as artworks, into an investment portfolio had been validated (Baker & Filbeck, 2013), as explained below.

First, the inclusion of art in a portfolio has been demonstrated as an effective means of portfolio diversification (Fraser-Sampson, 2010; Bruns, 2013). To evaluate financial returns

of art investment, scholars adopted data from different art suppliers and art genres to compare the performance of investment portfolios with and without art (e.g., Chen, Baierl & Kaplan, 2002; Chen, et al., 2005; Baker & Filbeck, 2013; Rozell, 2016), revealing superior financial performance in portfolios with art. In addition to the revenue generated by art transactions, art investment brings possible rental revenue (Bird, Liem & Thorp, 2013; Goldfayn, 2015) and copyright licensing revenue (Walter, 2015; Cooper, 2018).

Second, inclusion of artwork hedges risk in an investment portfolio. Despite art historically being positioned as a risk generator in a portfolio (Pfeffer, 1972), recent empirical studies have found low correlations between art and other assets. Mei and Moses (2002) leveraged over 80,000 repeat auction sales to measure the art market, suggesting artworks' lower volatility and low correlation with other assets; with richer art transaction records, subsequent studies identified negative correlations between art and other assets (Karadede-Bouras & Laipodis, 2015; Potocki & Rogozińska, 2015).

In addition to financial inducements, fine art investment provides a unique source of aesthetic return. As an extreme case of a heterogeneous commodity (Frey & Eichenberger, 1995), the aggregate supply of artwork is non-augmentable due to its non-replicable nature. The supply of artwork is fixed, and constrained by creative, temporal, and physical limitations. Grounded in this assumption, Worthington and Higgs (2003) compared the art and equity markets, and pointed out that in addition to price rises, fine art investors can also expect a "psychic return" from "artworks". Gerlis (2014) conducted a nuanced comparison between fine art and six other types of alternative assets, concluding that unlike the luxury-goods and wine industries, which were required to boost demand for their products, art naturally attracts "a mass-market audience" who support its uniqueness.

1.4.2 Which Art to Invest in

Not all artworks are worth investing in. Only high-value, top-end pieces are deemed worthy of investment as alternative assets. For example, Anderson (1974) traced 13,000 art sales over 200 years, found that only 1730 were reselling transactions, mostly of valuable masterpieces; Stein (1977) exclusively sampled masterpieces in the US and UK, revealing an 11% value appreciation. Since 1990, in light of MPT, art market research started to examine fine art investment in a portfolio management context. In 1995, Tucker, Hlawischka and Pierne examined over ten years' historical data from art auctions and concluded that auction-level art should comprise a large portion of an optimal portfolio. The proposition is confirmed by Singer and Lynch (1997), who differentiated artworks in three catalogues based on the artist's reputation, concluding that only "category one" artworks (by artists as Picasso, Matisse and Manet) are "quasi substitute[s] for financial instruments".

Art market studies in the 20th century have almost exclusively concentrated on fine art with Sotheby's and Christie's, centring on top-end, valuable art pieces. Reid (2004) evaluated the return from artworks in different price ranges and advised art investors "to be very conservative and pay for quality" (p. 251). Korteweg, Kraeussl and Verwijmeren (2016) reaffirmed the finding by regression analysis of transaction records of 32,928 auction-level artworks on artists' characteristics, revealing that the inclusion of artworks by top-selling artists outperform the inclusion of multiple average-quality artworks in an investment portfolio. Beyond masterpieces in the West, this "masterpiece effect" has been demonstrated in emerging art markets, such as in Venezuela (Garay, 2021) and China (Wang, 2017).

Beyond masterpieces, two categories of artworks present no investment value: contemporary artworks and artworks created by artists without an established reputation. Contemporary arts are defined as "cutting-edge" pieces with "low unit and negative investment value" (Robertson, 2005, p.15). In particular, artworks in the "post-war and

contemporary" category present a historical speculative bubble (Kräussl, Lehnert & Martelin, 2016). Compared to artworks in auctions, contemporary artists' creations sold online, such as via eBay, are considered "sofa art" rather than consumption goods (Highfill & O'Brien, 2007). Meanwhile, masterpieces worthy of investment are being withdrawn from public circulation, and the public market left with "less valuable art pieces for the speculator to speculate on" (Robertson, 2005, p. 267). For art intermediaries, such as auction houses and art securitization platforms, being perceived as legitimate in the art market assists in resource competition of masterpieces worthy of investment.

1.4.3 Who are the Investors

Art investors are classified by their nature, intention, and collection interest. Art market studies separate organizational collectors (e.g., institutions, business corporations, and foundations) from individual investors (Appleyard, 2012), and subdivide art investors into spectators, collectors, and investors based on the purpose of purchasing art (Robertson, 2008). This thesis examines how auction houses and art securitization platforms achieve legitimacy from art investors in the digital era. As art businesses, they achieve legitimacy from art investors who trade artworks because they love art as well as seek financial returns. Further, art investors have been sorted by their research interests to analyse investor clusters by blue-chip artworks (Rozell et al., 2014), emerging artists (Zorloni, 2013), and artworks from a certain nation or historical period (Liu, 2015; Etro & Stepanova, 2017).

Existing art market studies almost exclusively centre on individual art investors with "high net worth" (Robertson, 2008) from the "entrepreneurial super-rich class" (Satchell, 2009). Historically, studies identified that wealth remains a key factor in profiling private collectors (Renneboog & Spaenjers, 2013), and the opaque nature of art information left general consumers confused (Coslor, 2016). While emerging art intermediaries, such as art funds and art securitization platforms, provide a broader range of art investors with more

affordable channels of art investment, how novel art securitisation platforms are perceived by expanding art investors is yet to be studied.

1.4.4 When to Invest

While much research interest has been paid to rationale and intermediaries of art investment, the 2008 financial crisis heightened sophistication of the art sector in financial services, and induced discussions on investment timing (Eckstein & Willette, 2012). Initial studies evaluated art investment in a war context, reporting a surge in trading activity during the war (e.g., David et al., 2017; Euwe & Oosterlinck, 2017). Increased trading is caused by the "portable and easy-to-hide" nature of fine art (Oosterlinck, 2017), evident in the higher return of smaller and more transportable printing during war (David et al., 2024). Thereafter, nuanced timing of art investment, namely during the second half of any war (David et al., 2024) and in a post-crisis period (Kraeussl & Wiehenkamp, 2012), have been identified as providing preferable timing for acquiring art. In particular, David et al. (2024) constructed a dataset of 616, 844 sales in UK auction houses from the early twentieth century to investigate art investment in times of crisis, suggesting art as a safe haven during political turmoil. Yet, how these findings relate to art investment through art securitisation platforms is little understood.

Exceptions to the above suggested timings exist in certain markets and art genres. Higgs (2012) focused on the Australian art market and discovered a slight decline in art returns during the financial crisis between 2008 and 2009. Öztürkkal and Togan-Eğrican (2020) examined art auction sales in Turkey during and around the global financial crisis. Despite confirming that there is an increase in art transactions after crisis, a positive correlation was reported between art returns and multiple financial volatility indices. In South Africa, prices of oil and watercolour exploded during the run-up to the 2008 global financial crisis, rather than in war and post-war periods (Binge & Boshoff, 2021).

During the COVID-19 pandemic, which was a global health crisis, people's health conditions, social communication, as well as financial wellbeing were being challenged (Rentschler & Lee, 2021). Artists, collectors, and dealers reported fewer art investors with an instrumental speculation view during the pandemic (Buchholz, Fine & Wohl, 2020), focusing less on purchasing art as a financial instrument and more on other motivations, such as aesthetic enjoyment or cultural value. Chapter four of the thesis examines art share transactions that occurred during and after the COVID-19 pandemic.

1.5 Methodology

1.5.1 Research Philosophy

Research philosophy refers to the fundamental worldviews or belief system that governs empirical investigations (Clark & Johnson, 2006), and the relationship between philosophy and social science has a long history (Hughes, 1990). In a study, the philosophy adopted by a researcher indicates the way through which he or she views the world (Saunders, Thornhill & Lewis, 2019). More specifically, philosophical assumptions of ontology, epistemology and axiology determine the selection of theoretical perspectives and research methodology (Creswell, 2018), explained below.

Ontology reflects the nature of reality, epistemology focuses on what counts as legitimate and acceptable knowledge, while axiology concerns the role of the researcher's own values and ethics (Saunders, Thornhill & Lewis, 2019). In this study, the ontology is subjective, as it deems managing and organising as a flux of processes, experiences, and practices, which consequently changes with the social action and practical consequences in the art market. From an epistemology perspective, this study focuses on the problem and practices of legitimacy that conveys the social reality and informs future practice. In addition, the research holds a subjective axiology view and initiated the research with doubts about

legitimacy in the art market. However, the philosophical stance of the researcher does not constrain the selection of research methodology (Saunders, Thornhill & Lewis, 2019). In this study, a mix of quantitative and qualitative research methods has been adopted.

Based on the subjective views of social reality, this study adopts the pragmatist philosophy as it attempts to (1) understand the reality of practical consequences, for instance, the pragmatical outcome of securitized art investment, and (2) understand the social actors', namely art investors', views on the situation being studied (i.e., conducting art share investment in an online scenario). Pragmatists can be suitable for business and management research, as they assert that concepts, like legitimacy theory and modern portfolio theory, are only relevant where they support actions, in other words, the practice of legitimacy being achieved (Kelemen & Rumens, 2008). Pragmatism aims to provide practical solutions that inform the future practice (Saunders, Thornhill & Lewis, 2019), as the proposed research attempts to inform the practice of legitimacy achieving in the art market.

1.5.2 Approach to Theory Development

Research approach is a path of conscious scientific reasoning (Spens & Kovacs, 2006), while across the literature, inductive and deductive are the most prominent research approaches for knowledge acquisition (Saunders, Thornhill & Lewis, 2019). The inductive approach is grounded in existing phenomena and data and aims to develop theory, while deductive approaches focus on testing a theory with highly structured methodologies (Hibben, 1905; Feeney & Heit, 2001). This study, however, adopts the less known third approach, abduction, which can be appropriate to a purposive study as it leverages the strengths of induction and deduction (Spens & Kovacs, 2006).

Abduction is a creative inferential process that aims to suggest new theories in the form of hypotheses or propositions to secure firm future actions (Timmermans & Tavory, 2012; Flick, 2013). Abduction generalises new knowledge by applying hypotheses or

propositions in the form of theory testing, and it acknowledges the importance of both observation and reason (Flick, 2013). The thesis examines the legitimacy of art businesses in light of legitimacy theory and MPT, which could subsequently lead to derivations in theory development. In Chapter 2, abductive reasoning is applied through a longitudinal analysis of Sotheby's annual reports and annual summaries. The initial observation of Sotheby's was that it maintained investor trust, despite scandals and technological disruption, promoting an abductive inquiry into how legitimacy was perceived. In Chapter 3, abductive reasoning is used to interpret how new ventures without historical credibility gain legitimacy. The analysis of over 6,000 social media posts and investor comments revealed patterns of entrepreneurial identity and technological distinctiveness that were not fully explained by existing legitimacy literature that focuses on norm-conformance approaches for gaining legitimacy. In Chapter 4 abduction enables the interpretation of art investors' behavior in the context of art share transactions. This provides an abductive examination of pragmatic legitimacy. Investor sentiment becomes a predictor of pragmatic legitimacy in the art market characterized by information opacity and novelty.

1.5.3 Research Method

This study presents multiple case studies of auction houses and art securitization platforms in the global art market. It entails field-level cases using secondary data. Case studies are defined by Yin (2003, p. 17) as “empirical inquires that investigates a contemporary phenomenon within its real-life context”. All cases of art businesses adopted in this thesis are investigated through document research, narrative and financial analysis, in order to answer the research question.

Each of the three papers takes a different angle on the approach to answer the research question, operationalising the overarching research question for that paper. The thesis uses a mix of qualitative and quantitative data, to embed the story told in the dynamic and ever-

changing global context (Almeida, Faria & Queirós, 2017). The study aims to produce findings that allow participants—in this case investors in the art market—to demonstrate their role in engaging in it, either traditionally or innovatively. This approach resonates with the use of legitimacy theory, which builds on the view that the art market and the players in it have been elitist, with new entrants seeking to disrupt that exclusivity. Such a paradigm allows new knowledge to emerge from the data, extending understanding of the art market and its place in global business ventures, allowing the researcher to uncover knowledge in different forms, bringing it to the surface, and sharing with others through the dissemination of the work in this thesis.

1.6 Contribution of the Thesis

This thesis contributes to the literature and empirical studies methodologically and theoretically. It does so by examining the legitimacy of established and novel organizations in the art market, in the era of digital transformation, in order to explain how they are perceived at different stages in the business cycle as legitimate for art investors. The first contribution provides responses to two enduring conundrums, namely, how established art organizations overcome legitimacy challenges. The second contribution illustrates how new ventures select between two opposing legitimacy-achieving approaches, conforming to existing market norms, and or conveying distinctiveness and uniqueness. The third contribution is to examine the impact of investor sentiments on art returns and transaction volume on a daily basis. Each of the three papers in the study examines one of the three contributions outlined above. Each of the three published papers in the thesis is now presented in high-level overview.

Paper One

Chapter two of this thesis presents an article entitled *Sustaining legitimacy in the digital era: A case study on Sotheby's*. This longitudinal study identifies Sotheby's

legitimacy challenges based on the typology of legitimacy as suggested by Suchman (1995), decoding how Sotheby's leverages digital transformation to overcome legitimacy challenges and regain trust from its investors. This chapter makes two contributions in terms of, first, methodology, and second, theory. First, in contrast to previous studies which adopt return on investment to measure the pragmatic performance of an auction house (such as Mei & Moses, 2002), this chapter makes a novel contribution by evaluating the effect of regulatory and cognitive challenges on Sotheby's resource access.

In particular, since the study is based on information obtained from Sotheby's annual reports, the study is free from the limitation of applying third party interpretation on Sotheby's digital transformation strategies and practices. By investigating the only auction house that ever listed on the stock market, it identifies how established art organizations sustain legitimacy from heterogeneous investors, which is often neglected in organizational studies (Tracey, Dalpiaz & Phillips, 2018). Analysis of annual reports showed how Sotheby's sustained local-level legitimacy by being viewed profitably and as compatible to their investment wishes by high-net-worth investors in the art market (Dowling & Pfeffer, 1975; Hannan & Freeman, 1977), as well as maintaining category-level legitimacy by reinforcing broader investors the need for an art auction house business model (Kostova & Zaheer, 1999).

Second, our findings challenge the prevailing notion of public acceptance, which is defined as the extent to which the population resonates with the general public (Kuilman & Li, 2009), as a determinant of survival and resource accessibility in the art market. Rather, in the art market, established organizations with an historical operational track record can protect accomplishments by transforming digitally to address art investors' demands for the supply of top-end artworks, security transitions, and confidentiality.

Paper Two

Chapter three of this thesis presents an article entitled *Leveraging entrepreneurial identity and technology: Legitimacy of art securitization platforms*. Adopting four art securitization platforms as instrumental cases, the article investigates the approaches by which technology-driven new ventures achieve legitimacy from art investors. The contribution of the article is threefold. First, it is the first article to investigate art securitization platforms. The article expands the scope of art market studies from prevailing organizational subjects (i.e., auction houses, art galleries). It challenges the verdict that art securitization is a risky, costly, and unregulated means of investment (McLean, 2008; Zhang, 2019); Rather, it demonstrates that art securitization platforms can survive, grow, and be perceived as legitimate in the art market.

Second, the article advances studies on arts organizations by methodologically applying a novel measure of legitimacy. Following Bitektine's (2011) definition of legitimacy as a perceptual phenomenon that concurs "a taste, assessment, or judgment of the appropriateness of an organizational product, practice, or characteristic" the study adopts art investors' comments under art securitization platforms' social media posts, the "electronic word of mouth" (eWOM), and assesses the positivity of investor comments as a measure of art investors' perception of appropriateness of art securitization platforms. Prior to this study, eWOM has only been applied to measure audience perceptions and judgments on an industrial level (such as to measure the impact of audience reviews on movie going decisions in the film industry) (Basuroy et al., 2019), and as a measure of investor sentiment towards specific practices within an organization on an individual level (Renneboog & Spaenjers, 2013). This study, for the first time, adopts eWOM as a measure of investor perception at the organizational level.

Third, this paper reveals the effectiveness of being distinctive *alone* as a legitimacy achieving approach. The study advances legitimacy theory by challenging its underlying

assumption of distinctiveness counteracting the attainment of legitimacy from audiences (e.g., DiMaggio & Powell, 1991; Navis & Glynn, 2011). In the art market, new ventures can use novel technology and a form of distinctive entrepreneurial identity to convince investors to purchase art through art securitization platforms, even without conforming to norms.

Paper Three

Chapter four of this thesis entails a book chapter entitled *Are art investors rational? Investor sentiments and art returns*. Aligning with the findings in article two, which suggest catering to investors' expectations (i.e., expected level of return on investment) as an effective approach to achieving legitimacy, this study adopt *Masterworks* as a case for studying an art securitization platform. It investigates the pragmatic legitimacy of new technology-driven ventures. Following Suchman's (1995, p. 578) typology of legitimacy, an organization's pragmatic legitimacy rests on the "self-interested calculation of the organization's most immediate audiences", which could be achieved by providing tangible rewards to the investors.

In essence, art investors seek pecuniary returns and hedges risk through investment. The first contribution of this paper is to assess the association between art share returns and stock returns, and analyse the rationale of art as an alternative asset the in light of MPT.

Further, by adopting art share transaction data, the study for the first time examines same day predicting power of stock returns on art returns. Since transactions occur less frequently in art auctions than in the stock market, prior to this study, the literature was only able to track the impact of stock returns on art market fluctuations by six to 12 months (e.g., Pénasse, Renneboog & Spaenjers, 2014; Öztürkkal & Togan-Eğrican, 2020). Return associations have been identified between stock and transactional assets, including bonds (McMillan, 2020), gold (Baur & Lucey, 2010), and other metals (Jacobsen, Cheng & Lee, 2019). The study supports the prevailing notion of art as an alternative asset in times of crisis.

1.7 Conclusion

This thesis argues that legitimacy plays an important role for arts organizations, arguing that each organization at a different stage in its development leverages different approaches to achieve and sustain legitimacy with art investors. The practical implication of the thesis is that there is an identifiable need for established organizations to sustain regulatory legitimacy to remain competitive, and apply technologies that have experimented as applicable in the art market. For new ventures, the liability of newness can be moderated by providing investment returns, leveraging a distinctive identity, and conveying technological distinctiveness.

This chapter presented the purpose, background, approach and the contribution of the thesis, as well as outlining the links between the published papers, which provides a framework for this thesis. The reminder of the thesis is organized as follows. Chapters Two, Three, and Four present the three papers respectively. Chapter Five provides concluding remarks, including a brief summary, a short discussion of the significance of the thesis in this emerging field of research in the art market, its contribution to new knowledge, the limitations of the study and suggestions for future research.

Chapter 2 Organizational legitimacy in the digital era: The case of Sotheby's

2.1 Abstract

How and when do established art organizations maintain legitimacy with art investors in the digital era? Using annual report content analysis in a case study on Sotheby's (2000-2023), the only large publicly listed auction house, this study identifies when and how Sotheby's maintains legitimacy through digital transformation to meet investor expectations. It identifies three phases of changes to legitimacy. Findings suggest that for established organizations, legitimacy is maintained by decoupling illegitimate practices and disclosing legal operations when regulatory legitimacy is challenged; by enhancing global presence and fostering investor relationships when pragmatic legitimacy is expected by investors; and by leveraging resources and experimenting with novel technologies when cognitive acknowledgement is at risk. The study contributes to the literature by demonstrating the valence of longitudinal analysis in understanding legitimacy management in the art market where public data are limited, identifying effective digital transformation approaches established organizations can apply under different conditions.

Keywords

Legitimacy, digital transformation, technology, auction house

2.2 Introduction

"Legitimacy ultimately exists in the eye of be-holder."

- Zimmerman & Zeitz, 2002, p. 416

This paper investigates how and when an established art organization maintains legitimacy with art investors in the digital era. It examines the case of Sotheby's, the only renowned, global auction house that has ever been publicly listed. The study starts in the year 2000, when World Wide Web (www) emerged, and internet technologies led to "paradigm shifts in art trade and mediation" (Sidorova, 2019) and generated "novel structures for art businesses" (Hackforth-Jones & Robertson 2013). The study ends in 2023, the year of Sotheby's 250th anniversary when post-COVID digital initiatives were normalised. After Sotheby's first online auction in 1999, the art market witnessed an increasing application of novel technologies, such as online auction, blockchain-based transactions, and NFT arts. Applications of these disruptive technologies enabled efficient information diffusion (Brewster, 2006; Robertson, 2011), greater transparency (Tompkins, 2016; Prieto-Rodriguez & Vecco, 2021), and broader audience reach (Adam, 2014) in the art market. While literature have assessed the strengths of technology application, the phenomenon of digital technology as a powerful innovation to established art businesses has been overlooked (Sidorova, 2019).

For established organizations in a long-existing market, maintaining legitimacy represents a crucial factor of organizational survival and growth (Meyer & Rowan, 1977). Legitimacy is defined as a social judgment of acceptance, appropriateness, and/or desirability" (Zimmerman & Zeitz, 2002). Maintaining legitimacy is crucial for organizations to access resources, especially in a resource-reliance market environment like the art: while there is a seemingly unlimited supply of artworks, top-tier masterpieces are scarce, and cash to support and develop the market are always limited (Robertson, 2005). Established

organizations such as Sotheby's compete with other established (i.e., Christie's, Phillips) and new (i.e., Bored Ape Yacht Club, Masterworks) art organizations for creative artists, top-tier artworks, specialised art experts, and high-net-worth investors.

Maintaining legitimacy as an established organization is not a once-in-a-lifetime effort. An organization can survive by maintaining legitimacy when environment jolts occur (Elsbach, 1994), but collapse due to failure to sustain legitimacy against external crises (Samdanis & Lee, 2019). This study investigates how one of the largest, oldest and most prestigious auction houses established in 1744 (Sotheby's, 2024), strove to be viewed as appropriate and desirable by art investors in the digital era.

Sotheby's has faced ongoing legitimacy challenges since 2000. For instance, in February 2020, Sotheby's was implicated in a price-fixing conspiracy with its main competitor Christie's, and was fined US$45 million (Ashenfelter & Graddy, 2005); With the pace of technology advancements, Sotheby's faced operational challenges on whether and when to expand its online auctions and digital platforms. In November 2024, Sotheby's paid New York State US$6.25 million to settle a lawsuit accusing the auction house of assisting collectors to avoid paying taxes on art sales (Small, 2024). To understand how and when Sotheby's maintains legitimacy by overcoming challenges, this study conducts a longitudinal analysis on Sotheby's annual reports over two decades to decode its strategies and practices. Newspaper articles are analysed to obtain public judgments on the acceptance, appropriateness, and/or desirability of Sotheby's practices.

The study makes three novel contributions. First, it identifies practices of digital transformation as a potential solution to regulatory, pragmatic, and cognitive legitimacy challenges faced by an established business in the art market. The core explanation behind the effectiveness of digital transformation is its capability in disclosing regulated operation,

reaching broader investors, and cultivating new market opportunities. Second, the study applies the legitimacy frame to examine an established auction house, an approach that is salient and novel in this domain. This framework has limited application in art studies on art-political relations (Rentschler et al., 2021), new art ventures (Liu et al., 2025), and online art marketing (Lee & Lee, 2019). Third, the study demonstrates the valence of longitudinal analysis in understanding legitimacy management in the non-transparent art market where public and accessible data are limited.

The remainder of this paper is structured as follows: first, it reviews features of the art market in the digital era and the legitimacy challenges that art organizations face. Next, it provides an overview of Sotheby's and its rationale as an instrumental case, with the setting, data and methods applied in the study. This section is followed by the findings, discussion, and conclusion.

2.3 Literature Review

2.3.1 Art Market in the Digital Era

Compared with other markets, problems of uncertainty (Beckert, 1996) and lack of transparency (Mossetto & Vecco, 2003) have beset the art market. For standard goods, quality and value are based on the physical and functional characteristics the good (Akerlof, 1970). However, quality and quantity of artwork supply are uncertain to market intermediaries; while meaning and value of artworks are uncertain to non-professional investors (Samdanis & Lee, 2019). Meanwhile, it is unrealistic for art investors to acquire information about all artists and artworks to evaluate the value of art. Realistically, in the absence of clear standards of valuation, investors enter a state of cognitive confusion which favours the acceptance of anothers' judgment (Weber, 1979). In the digital era, novel

technologies have launched myriad transformations in the art market, presenting potential opportunities to solve these challenges.

Application of digital technology is shifting art market norms and relations. Inside the art market, technologies have enabled novel art practices including digital art, online auctions, holograms, NFTs, AI-generated art, and more. Externally, digital technologies have integrated art sectors with other industries, such as finance (Frey, 2019), inducing an optimistic view across the literature. For instance, Hackforth-Jones and Robertson (2013) investigated the acceptance of multiple online art businesses, which were supported by both "new interdependencies between art, technology and commerce" (p.171) and "prospective collectors and investors". The topic of online art investment and its strength in accessibility and transparency has been increasingly mentioned in studies on future art markets (i.e., Zorloni 2013; Flynn 2016).

The literature has examined three features of the art market in the digital era, including *efficient information diffusion* as the first (Brewster, 2006; Robertson, 2011). Information displayed online is accessible to all netizens and can attract potential investors who "hesitate about entering [an] art gallery to educate themselves before buying" (Adam, 2014, p.122). With this capacity of spreading information to global consumers, disruptive technologies have attracted a *broader investor-base* to the art market. The online art market can "reach manifold new buyers and grow the market colossally" (Adam 2014, p.121). For instance, in June 2023 when Sotheby's conducted an auction of 37 NFTs in its "largest ever live sale of digital art", it attracted the "youngest audience group ever seen in the sales room" mostly first-time bidders (Small, 2023). Meanwhile, digital evolution leads to *greater transparency* in the art market (Prieto-Rodriguez & Vecco, 2021). Studies have proved the online art market's capacity in providing "a minimal amount of personal contact" (Vickers, 2005), preventing crimes (Tompkins, 2016), and removing social barriers (Gilkes & Tennant

2014). It creates a marketplace where “a certain status and wealth” (McLean, 2008) and “transactions through a central authority” (Rosenberger, 2018) are no longer required from art investors.

However, in pace with rapid digital transformation in the art market, regulators have struggled to implement timely legal measures (Hufnagel & King, 2020), and art organizations have limited supervision of their online marketplaces and investors’ privacy (Urban et al., 2009), exposing art organization to legitimacy challenges. For instance, auction houses have been accused and fined for price fixing and tax avoidance (Vogel, 2001), and claims over the theft of NFTs may ensue (Quiñones Vilá, 2023).

2.3.2 Legitimacy Challenges

Defined by Meyer (1982), crises and challenges are transient occurrences that are difficult to foresee and whose impacts on an organization are potentially inimical. It is often the case that an organization’s failure to survive disruptive events, such as legal challenges, natural catastrophes, and environmental shifts, can impair its social acceptance and that of the industry to which it belongs. This literature review highlights three different perspectives of organizational legitimacy, namely regulatory, pragmatic, and cognitive (Aldrich & Fiol, 1994; Suchman, 1995; Scott, 2001), which helps identify the key evaluators in the process of maintaining legitimacy.

Regulatory legitimacy, also known as sociopolitical legitimacy, expounds on whether an organization is accepted as “appropriate and right given existing norms and laws” (Aldrich & Fiol, 1994). Being perceived as regulated involves a generalized sense that an organization has acquired credentials and certificates, and is operating in accordance with certain regulations, rules, and standards. Norms and laws provide a yardstick of regulatory

legitimacy, thus making it easy to be evaluated. For instance, in the literary field, regulation of copyright saw the book market change and develop (Sapiro, 2003).

An organization's regulatory legitimacy can be challenged under two circumstances: when changes in the regulatory framework appear in the environment, and when the organization's irregulated actions were disclosed to its investors. The prior circumstance usually occurs in an environment where the legitimacy issue was salient primarily at the industrial level, and the regulatory framework might derive changes in the nature and scope of organization activities (He & Baruch, 2009). Under the later circumstance, the regulatory challenge might not occur directly after the organization's failure to obey norms, but manifest when its unethical or illegal practices are disclosed to investors. However, investors are prone to consider the organization fully accountable for conditions that could have been prevented, such as scandals and accidents due to operator errors, and but faced less blame when facing externally induced crises, such as natural disasters or pandemics (Marcus & Nichols, 1999; Liu et al., in press).

Certain social actors in society are empowered to confer regulatory legitimacy. Government regulators, for instance, were granted this standing to confer regulatory legitimacy to an organization whose observed features, structural attributes, and outcomes of activities are socially acceptable and benchmarked against social norms. The recognized organization thus acquired government backing and favourable investor judgment (Bitektine, 2011, p.157). In contrast, the government is authorized to sanctioned or dismantle an organization which fails to implement social norms. This judgment might prevent an organization from acquiring resources, and would force the organization to change the way it operates (Walmsley, 2016).

Regulators pay attention to different degrees for new and established organizations in an industry. With limited resources and market impact, a new venture attracts eager

supervision, notwithstanding its possibility of violating social norms. In parallel, regulators also presume an established organization is regulatorily legitimate, until any of its illegitimate actions surface (Deephouse, 1996). However, regulators conduct strict sanctions when eventually revealing that an established organization is inappropriate in its forms, process, outcomes, and features. Scrutiny thus results in legitimacy disruption of the organization, which spreads to other organizations in the same field (Desai, 2011). Organizations that operate similarly might receive high scrutiny and become more likely to conduct defensive actions in order to maintain their regulatory legitimacy.

Pragmatic legitimacy examines whether an organization is "appropriate and desirable by addressing norms and values" (Suchman, 1995). Pragmatic legitimacy arose from an organization's capability to achieve practical outcomes in its immediate environment (Zimmerman & Zeitz, 2002). In fact, pragmatic legitimacy is measured differently from regulatory and cognitive legitimacy due to its tangible characteristics (Suddaby et al., 2017). It can be measured by crime rate in law enforcement agencies (Desai, 2018); by media coverage and firm characteristics in a public-listed companies (Jeong & Kim, 2019); and by return and accessibility of art investment in arts organizations (Campbell, 2008). Disruptions of pragmatic legitimacy occurs when an organization's endorsement is under risk (Elsbach & Sutton, 1992), and when industrial upgrades occur (Hinings et al., 2018).

Cognitive legitimacy evaluates whether an organization adheres "widely held beliefs" and "social taken-for-granted assumptions" (Hannan et al, 1995). Given the divergent nature of institutional contexts, measures of cognitive legitimacy vary. In general, cognitive appropriateness focuses on the similarity: if an investor is familiar with other organizations of similar kind, the focal organization is simply categorized as desired, and no further scrutiny occurs (Bitektine, 2011).

Like regulatory challenges, established organizations, that receive more newspaper and online media coverage, are more threatened by cognitive challenges. On the one hand, this media attention enhances the likelihood of fastidious and clandestine stories appearing. These stories might differentiate the focal organization from "one of those" whose legitimate status has already been evaluated and confirmed (Bitektine, 2011). Meanwhile, a more established organization ties closely with other social and economic actors, and its external interactions can be closely monitored by the media.

2.4 Methodology

2.4.1 Research Setting

The characteristics of the art market and its recent evolution denote its relevance for studying legitimacy management of established organizations, like Sotheby's. First, the art market is demonstrated as an inefficient market due to the way auction market functions (David, Oosterlinck & Szafarz, 2023). Prior to the auction, art sellers set a reserve price of each artwork, below which the transaction will not be processed. Thus, values of unsold artworks are neither realized nor recorded in art market indices. Further, unlike in the stock market, in the art market, the supply of art is inelastic: insider trading is not outlawed, and short selling is possible (Baker, 2007). As a consequence, art market investors may substitute lack of market efficiency for legitimacy.

Second, the emergence of digital technologies has induced a disintermediation trend in the art market, making auction houses less important. Online marketplaces like Artsy and Saatchi Art are embracing online auctions, of which global collectors can engage without physically attending exhibitions. Artists, investors can bypass auction houses to trade artworks, challenging auction houses' role as central players in high-value transactions.

Traditionally, the emphasis on traditional auction and geographical art centres (i.e., London, New York) is a key part of the story of globalization, while in the contemporary time, the financial capital and the "enormous number of wealthy customers" becoming so globalized, making the online art market "almost stateless" (Degen, 2024, p.137).

Third, there is the rise of blockchain technologies and non-fungible and enabling new forms of art ownership, including fractional ownership and fractionalized property rights. High-value artworks are made accessible to broader investors for lower fees, reducing the demand for traditional auctions with sole ownership an artwork. Fractional ownership appeals to a younger demographic who may not resonate with the luxury and exclusive branding of former art market intermediaries, such as auction houses (Abbate et al., 2022).

Fourth, as art investment becomes virtual and digital, art investors' understanding of processes and ownership are shifting (Belk et al., 2022). Investors report alternate but sometimes overlapping motivations. Investors may purchase art to hedge risk of investment portfolio (Kumara, 2013), generate financial return (Bird et al., 2013), appreciate artworks' aesthetics value (Gerlis, 2014), and convey social status (Renneboog & Spaenjers 2013). An established organization's legitimacy management rests heavily on communication with its various investors (Elsbach, 1994), and auction houses need to maintain legitimacy from a broader range of investors to remain competitive in the art market.

2.4.2 Sotheby's

The secondary art market is a largely segmented market dominated by the two largest global auction houses, Sotheby's and Christie's. Sotheby's auction house, originally called Baker & Leigh, was founded in 1774 by Samuel Baker in London. The auction house specialises in high-value transactions, blue-chip artworks, and luxury collectables. In 2023, Sotheby's and Christie's shared a combined annual sales turnover total of US$7.3 billion, covering almost

half of the global turnover of US$14.9 billion (Art Price, 2024.). In this study. Sotheby's digital transformation between 2000 and 2023 is studied for three reasons.

First, Sotheby's pioneered in market expansion and digital transformation compared to its competitors during this period. Historically, Sotheby's was the first to hold auctions in non-Western markets (i.e., 1969 in Tokyo, Japan; 1973 in Hong Kong, China). In the digital era, Sotheby's pioneered conducting digital transformation, such as online auctions (2000), live stream auction, and NFT art. In 2023 when Sotheby's celebrated its 250th anniversary, technologies application has been normalized by 25 auctions of digital art, assisting Sotheby's to cultivate opportunities in the digital art market and to recover from the sales drop after the COVID-19 pandemic.

Second, Sotheby's is the only global auction house that has ever been publicly listed, providing nuanced data to investigate its digital transformation strategy and practices over significant part of the research period. The financial data, regulatory filings and market sentiment are disclosed in Sotheby's annual reports, and the transformation between public and private organization provides information to analyse legitimacy management under different circumstances.

In addition, Sotheby's faced deeper legitimacy crisis than its global art auction house competitor Christie's, that choose to cooperate fully with the US authorities to address the price-fixing scandal. While Sotheby's initially denied wrongdoing and resisted cooperation, Christie's chose to fully cooperate with the US authorities by self-reporting the cartel-like behaviours by turning over internal documents. As a consequence, Christie's was able to avoid criminal charges and major financial penalties while Sotheby's was exposed to a public battle to restore legitimacy.

2.4.3 Data Collection

The study applied an adapted framework to analyse and evaluate organizational strategies to achieving legitimacy with art investors in the digital era (Sethi, 1979) by addressing legitimacy challenges under different temporal, technological, and legal conditions. In the art market where transparent and public data are limited, it is difficult to access and analyse nuanced and quantitative data. One approach to assess organizational performance is to draw on the notion of legitimacy to study how an organization achieves acceptance and positive judgments from external stakeholders (Suchman, 1995), such as art investors.

Twenty-four years of annual reports between 2000 to 2023 were the primary source for this study, enabling a longitudinal evaluation of Sotheby's strategies in the digital era. We delved deeply into the organizational data, with a focus on the practices and strategies in response to the digital transformation. Report contents were coded to identify phrases and themes of Sotheby's legitimacy achieving efforts. For instance, we gathered historical data and changes of online sales volume and Sotheby's overall budget in online auctions to examine its online transformations strategies.

We then collected and qualitatively analysed newspaper media reports relating to Sotheby's legitimacy challenges to triangulate the phases and themes of its legitimacy-achieving approaches (Krippendorff, 2013). Media judgments reflect whether Sotheby's practices and strategies are acceptable and appropriate from its external stakeholders, including art investors. We conducted a media search in a major US newspaper, *The New York Times*, which is the leading outlet from where Sotheby's was publicly listed. By using media data, we investigated investor expectations in an auction house (Sivertsen, 2025). Key words were identified by two researchers (i.e., 'Sotheby's' with 'auction house', 'art investment', 'digital transformation') to detect relevant media content. After manually

excluding irrelevant and repetitive contents that appear both online and printed, we identified 436 media articles.

2.4.4 Content analysis

We analysed the case of Sotheby's with data composed of activities and events to investigate how and why Sotheby's legitimacy achieving approaches evolved in the digital era over two decades (Langley, 1999). Content analysis consists of two phases. In the first phase, we turned to Sotheby's annual reports and reviews to identify temporal brackets that reflects "certain continuity of activities" (Langley, 1999). Shaping activities and events sequentially with temporal brackets, thus, enables identification of how one chronological phase led to and differs with other (Giddens, 1984). The lead author individually grouped and coded the textual content of events and activities (Boyatzis, 1998), meeting with a second coder to confirm categories, check credibility and consistency of the coding, and to resolve any interpretation discrepancies.

The second stage involved coding of newspaper articles to identify legitimacy challenges faced by Sotheby's, and art investors' judgment towards Sotheby's legitimacy. The lead author grouped newspaper articles by three temporal brackets, drawing on public comments towards Sotheby's organizational and financial statues to triangulate themes of each temporal phrase, and to understand the effectiveness of Sotheby's legitimacy management efforts. Although there is no standard for inter-analyser agreements (Armstrong et al., 1997), we carried out multiple rounds of discussion and achieved 90% inter-coder agreement, exceeding the 85% minimal benchmark for evidentiary content in qualitative studies (Saldaña, 2021).

2.5 Findings

Sotheby’s functions in a unique context where they are influenced by organizational and contextual pressures to conform and survive. The auction house has to navigate multiple pressures from internal and external environments while remaining close to investors. From 2000 to 2023, Sotheby’s conducted digital transformation in the art market with disruptive, volatile, and uncertain business environment to meet investor expectations. Drawing from annual reports and media articles, Table 2.1 provides an empirical framework for understanding Sotheby’s legitimacy pressures that have forced it to adopt digital innovations to transform the business. The table provides information of three phrases of Sotheby’s legitimacy efforts, including theme, legitimacy challenges, institutional and environment pressures, and investor expectations. Each of the three phases is now examined in detail.

2.5.1 Phase 1 Enhance Internet Transparency: 2000-2005

Phase 1 opens with a global price-fixing scandal involving Sotheby's, which came to light in 2000, as Sotheby’s seeks to enhance its internet transparency. Sotheby’s was seen to be in collusion with its main competitor, Christie's, engaging in illegal practices to fix commission rates charged to both buyers and sellers. The investigation, led by the U.S. Department of Justice, resulted in substantial financial penalties for Sotheby's, including a US$45 million fine, and the conviction of Sotheby’s then-chairman, A. Alfred Taubman (Vogel, 2000b). As was stated in Vogel’s media report in T*he New York Times,* the scandal affected Sotheby’s legitimacy with art investors (Vogel, 2000b), who were questioning Sotheby’s transparency (Vogel, 2000c).

Table 2.1 Sotheby's digital transformation by phase, theme, and challenge

	Phase 1: 2000-2005	Phase 2: 2006-2016	Phase 3: 2017-2023
Theme	Enhance Transparency with Internet	Broaden Investor Base Online	Cultivate Opportunities with Novel Technologies
Legitimacy challenge	Regulatory	Pragmatic	Pragmatic & Cognitive
Institutional and environmental pressures	- Federal antitrust investigation (Vogel, 2000a) - Continue antitrust investigation (Vogel, 2001) - Increase new charge in auction (Blumenthal & Vogel, 2000)	- Weak sales and slow rise in western markets (Reuters, 2007; Fabikant, 2016) - Christie's competes for global investors (Tang, 2007) - 2008 financial crisis led to sales drop (Rampell, 2008)	- Emergence of novel technology-driven ventures (Marcos & Reyburn, 2021) - Dropping sales during and after the COVID-19 pandemic (Pogrebin & Ryburn, 2022; Nayeri, 2023)
Investor expectations	- Legal auction process (Prieto-Rodriguez & Vecco, 2021) - Authentic artworks (Bocart & Oosterlinck, 2011) - Lower cost (i.e., transaction cost) (Kazumori & McMillan, 2005)	- Organization's positive online reputation and image (Canals-Cerdá, 2012) - Access and participation in territory and global art market (Perczel &Vedres, 2025) - Accurate estimation of artwork prices (Coslor, 2016)	- Bridge between physical and digital market (Buchholz et al., 2020) - Novel application of disruptive technologies (Roose, 2021; Nayeri, 2022)

Transparency is defined as the ability to know market prices, supply and demand, and other features of a trade good (Law & Smullen, 2008). When the scandal exposed art market practices, Sotheby's was under serious regulatory challenges. Sotheby's price-fixing activities led to increased government scrutiny and regulatory measures, with investors' questioning whether auction houses are legitimate. When an organization morally falters and legitimacy attack occurs, threats of survival occur, averting attention to issues of transparency and responsibility (Gharib et al., 2024). Therefore, Sotheby's strove to retrieve trust from art investors with the assistance of internet technology, disclosing conformance with regulations,

and facilitating online auctions with partners. Table 2.2 presents Sotheby's digital transformations in this phase.

Table 2.2 Sotheby's major digital transformation practices 2000-2005

Phase 1: Enhance Transparency with Internet	
2000	- Partner with Amazon, launch combined auction site sothebys.amazon.com - Launch Sothebys.com
2001	- Enter into strategic alliance with eBay - Terminate partnership with Amazon
2002	- Separate online auctions from eBay - Enable live auction and online bidding
2003	- Restructure online auction business
2004	- Enable internet-based service for sellers
2005	- Launch joint venture Sotheby's Diamond with Steinmetz Diamond - Adopt SAP-based enterprise systems

Sotheby's disclosed conformance with regulations by two means, first, by decoupling illegitimate price fixing practices from other legitimate structures, and second, by disclosing law-abiding efforts to mitigate the negativity of the price-fixing scandal (Mohr, 1982). It is difficult for an organization under legitimacy challenges to retrieve legitimacy if it has been linked strongly to members' illegitimate actions (Elsbach & Sutton, 1992). Thus, Sotheby's strove to separate its formal activities from its then-chairman, A. Alfred Taubman's, illegitimate actions. In Sotheby's annual reported released online, the organization constantly persuaded investors that their other operations are legitimate and would not be affected. When launching new initiatives, Sotheby's would clarify that each requirement of the legal contingencies "is carefully assessed" by third-party consultants (Sotheby's, 2003, p.16). Meanwhile, antitrust regulations that Sotheby's violated were decoupled from other auction-relevant regulations. Since 2000, Sotheby's constantly stated that other auction-relevant regulations, such as value-added taxes and currency exchanges, "do not impose a material impediment to the worldwide business of the company" (Sotheby's, 2000, p.6; 2005, p.7). In

this way, decoupling enabled Sotheby's legitimate structures to exist without interfering with its then-chairman's controversial activities (Meyer & Rowan, 1977).

Meanwhile, negative impacts of the price-fixing scandal were mitigated by the disclosure of Sotheby's law-abiding efforts online. In its annual reports, Sotheby's defined the price-fixing scandal as "the U.S. Antitrust Litigation settlement" that does not involve formal court proceedings (i.e., Sotheby's 2000, 2004). Information on how Sotheby's legally dealt with the aftermath was provided in its annual reports, including how the discount certificates (as part of the settlement) could be issued (Sotheby's, 2000, 2003), when and how fines were funded (Sotheby's, 2003 p.8), and the appointment of "a special committee" of legal and financial advisors that "carefully examine" all details of all transactions (Sotheby's, 2005, p.76). Sotheby's demonstrated that it was "not terrified by and panic[ked] about" the regulatory challenge, which stimulated legitimacy recovery (Suchman, 1995).

Beyond efforts in abiding by regulations, Sotheby's sought to repair its legitimacy by forming partnerships to facilitate online auctions. Internet technology enabled Sotheby's to initiate, facilitate, and continuously improve online auctions. Compared to live auctions, the online channel offered art investors with clearer documentation, more accurate recording keeping, real-time bid tracking, and fewer "behind-the-scenes" activities (Ginsburgh & van Ours, 2007). Sotheby's was determined in its internet application on an organizational level to position "ongoing development and implementation of internet technology" as its key strategy. Thereafter, annual reports stated that "the level of use to the internet and online service" (Sotheby's, 2000, p.5), and "consumer confidence in and acceptance of the internet as an online service" (Sotheby's, 2001, p.4) were identified as technology-related determinants of its strategic success.

Thus, Sotheby's did not work alone to facilitate online auctions, but by forming partnerships leveraged legitimacy spillover from its partners. Legitimacy spillover occurs when "greater social recognition for one organization leads to similar organizations receiving greater social recognition as well" (Kuilman & Li, 2009, p.229). By forming partnerships and strategic alliances with Amazon (2000) and eBay (2001), two trusted and credible e-commerce giants, Sotheby's resonated with art investors who perceive online transactions through Amazon and eBay as legitimate.

However, repairing legitimacy in online auctions comes at a price. Although Sotheby's expected online auctions to save a US$20 million in operation costs annually (eTal, 2016), initiating and facilitating them were costly (i.e., of US$56 million in 2000, US$23.1 million in 2001). The "significantly higher marketing expenses" (Sotheby's, 2000, p.18), "increase in salaries and related costs" (Sotheby's, 2000, p.19), "internet related net restructuring charges" (Sotheby's, 2001, p.15), as stated in their annual reports, forced Sotheby's to increase the charge of buyer's premium to 15% for hammer prices below US$15 000 (Sotheby's, 2000, p. 4), and broaden the investor base in the digital era.

2.5.2 Phase 2 Broaden Online Investor Base: 2006-2016

Phase 2 begins with the launch of the digital offering "mySotheby's" to enable 7/24 service and video streaming of evening art auction sales (Brewster, 2006). It ends with refining offerings of multiple online platforms and accelerating investment in digital marketing (de Aenille, 2016; Braden, 2016). Throughout this phase, Sotheby's promoted the notion that they would broaden the online investor, as it was a "basic idea of artnet" and brought "transparency to the art world" (Art Media Agency, 2013).

Sotheby's major competitor, Christie's, stepped into online-only auctions in 2006 and launched Christie's LIVE in 2008, creating pressure on Sotheby' to increase its online

capabilities. In response, Sotheby's annual reports first outlined a broadened investor base as the top strategic initiative in 2007, thus "broadening and extending the breadth and depth of relationship[s]" with clients (p.6). In 2008, the global economic crisis induced a 25% decline in Sotheby's revenue, an 87% decline in its net income, and anticipated adverse art market conditions (Sotheby's, 2008), promoting the auction house to seek a broader investor base. To overcome this challenge, Sotheby's launched and refined its website, applications, and social media to expand its global presence and foster client relationships. Towards the end of the phase, digital developments were embedded into Sotheby's organization structure, with the appointment of a Director of Digital Development & Marketing. Table 2.3 summarizes Sotheby's practices of digital transformation from 2006 to 2016.

Traditionally, beyond financial capabilities, individuals with educational achievement (Robinson & Garnier, 1985), capability to perform in culturally appropriate ways, knowledge of high culture (DiMaggio & Useem, 1978), and participation in high-culture events and activities (DiMaggio & Mohr, 1985) are recognized as potential art investors. With the pace of economic development in emerging markets, investors from both culturally dominant (i.e., the US, UK) and emerging global powers (i.e., China, Brazil) are favored with extended recognition in the art market (Braden, 2016).

To overcome the sales drop and remain competitive in the art market, Sotheby's leveraged online technologies to reach out to global investors, focusing on investors from emerging markets. In 2008, Sotheby's introduced eight global branches right after the CEO's letter in its annual report (2009, p.5), and for the first time, announced "increase[d] exposure to emerging markets" as a strategic initiative. Thereafter, "worldwide" and "global" were constantly stressed in major sections of their annual reports (i.e., in "Meeting worldwide demand through innovation" in 2010, "Develop Sotheby's presence in China and other emerging markets" in 2011). Sotheby's opened offices in Moscow (2010), Doha (2010),

Brazil (2011), and Beijing (2012), and normalised its overseas auctions in these locations as regular events.

Table 2.3 Sotheby's major digital transformation practices 2006-2016

Phase 2: Broaden Investor Base Online	
2006	- Launch "mySotheby's" to enable 7/24 service - Launch branded credit card - Introduce streaming video for evening sales
2007	- Merge with the State of Delaware
2008	- Introduce live online bidding - Launch web-based "mySotheby's" for real-time data access
2009	- Strength website features to reach global art investors
2010	- Launch BIDnow - Re-design sothebys.com - Launch "agnostic" mobile site - Launch Sotheby's mobile app
2011	- Re-launch of sotheby.com - Enable e-catalogue in other languages - Presented on Facebook, YouTube, and Twitter
2012	- Launch blog channel - Expand social media presence to Weibo
2013	- Expand online-only auctions
2014	- Partner with e-Bay to live-stream Auction - Include President of Digital and Enterprise in the board
2015	- Improve digital advertising - Recruit Executive Vice President of Digital Development and Marketing
2016	- Acquire The Mei Moses Art Indices - Acquire Orion Analytical - Refine applications in multiple platforms - Accelerate investment in digital marketing

In the online setting, Sotheby's foray into social media expanded its global presence, targeting investors from both the Western market (via Facebook, YouTube, Instagram in 2011) and emerging markets such as China (via Weibo in 2012). In the context of social media where organizational control over public engagement reduces, Sotheby's was able to "relate non-hierarchically" with potential investors. Investors judgments on Sotheby's social

media posts, in return, indicate a broader fit between Sotheby's digital transformation strategies and heterogeneous social norms (Etter et al., 2018). Thus, Sotheby's was able to maintain legitimacy by providing an understanding of global social media and refiguring organization-investor relations (Castello et al., 2016).

Given the pace of the broadening global investor base, Sotheby's introduced a strategy of "enhance[d] client relationship[s]" in 2006 (Sotheby's, p. 3), which was later upgraded to a strategic initiative of "increased focus on the company's most valuable relationships" (2007, p.6; 2007, p.6; 2009, p.6). At considerable cost (i.e., 54% of the total marketing expense increase in 2008) (Sotheby's, p.31), novel technologies were applied to foster relationships with global investors. Sotheby's launched applications for various devices, released online pre-auction catalogues, applied blog channels, and live-streamed auctions to streamline art investment. By 2014, 70% of Sotheby's lots had bids placed online, and more than 30% of buyers transacted online (Sotheby's, p.2).

However, maintaining legitimacy in the eyes of global investors is not a one-off effort, but an ongoing process of judgment formation (Haack & Sieweke, 2018). In 2016, Sotheby's reiterates the strategic importance of client-facing technology use, and for the first time, positions "embracing technology more effectively, both internally and through client-facing products" (Sotheby's, 2016, p.7). Thereafter, Sotheby's starts experimenting with cut-edge technologies, such as virtual reality (VR) and blockchain, to cultivate opportunities in the art market.

2.5.3 Phase 3 Cultivate opportunities with novel technologies: 2017-2023

Phase 3 begins with the art market introducing novel and technology-driven art investment channels, such as art securitisation platforms (Liu et al., in press) and NFT marketplaces (Naini et al., 2021), in a challenging global art market (de Aenille, 2016; Fabrikant, 2016).

Novel investment channels have appeared since 2017, providing more affordable and accessible art investment option to investors. In addition to the intense competition in the art market, the emergence of novel channels induced cognitive transformation among art investors, challenging Sotheby's primary source of stability (Henisz & Zelner, 2005). Investors started to question whether art auction, and the auction houses hosting it, remain appropriate and competitive in the contemporary art market. In 2020, The outbreak of COVID-19 pandemic in 2019 further disrupted Sotheby's ability to conduct live auctions, fostering quick adaption to an online operation (WTO, 2020), until 2023 where online auctions are normalised in Sotheby's (2023). To maintain legitimacy, Sotheby's initiated experiments with novel technologies to cultivate market opportunities and persuade novelty-seeking investors. Table 2.4 outlines Sotheby's major digital transformation strategies between 2017 and 2023.

Table 2.4 Sotheby's major digital transformation practices 2017-2019

Phase 3: Cultivate Opportunities with Novel Technologies	
2017	- Increase expense on live stream auctions - Launch online estimate platform
2018	- Acquire Viyet, rebrand as Sotheby's Home
2019	- Offer NTFs auction - Integrate blockchain for provenance tracking - Introduce Cryptocurrency payment
2020	- Launch live-stream only auctions - Host NFTs-auction series
2021	- Launch The Emporium - Create augmented reality technology lens with Snapchat - Launch NFTs marketplace Metaverse
2022	- Apply Metaverse to pay for artists' royalty - Host first single-owner live NFTs auctions
2023	- Host 25 digital art auctions - Introduce Bluetooth-enabled hardware wallet

2017 is a milestone of Sotheby's digital transformation. On a managerial level, Sotheby's announced Kevin Conroy as the President of Digital and New Platforms in the board of directors, and David Goodman as the Executive Vice President of Digital Development and Marketing Worldwide, thus further embedding digitisation into the organization. On an operational level, Sotheby's reported a significant US$21.4 million expenditure in technology advancements (Sotheby's, 2017, p.51).

Thereafter, Sotheby's positioned itself as a forward-thinking organization in the long-existing art market. It created "developing technology to attract new clients and create value" as a strategic initiative, announcing its forthcoming "advanced digital service" (Sotheby's, 2018, p.7). These digital services were soon actualised. Sotheby's was capable of focusing on innovation, experimentation, and sustained digital tools without pressure to create immediate short-term value for shareholders. Sotheby's initiated NFT auctions (2019), blockchain tracking (2019), and cryptocurrency payment (2019) within the same year.

Experiments with novel technologies cultivated opportunities for Sotheby's. As an organization face competing pressure from new ventures, Sotheby's maintained legitimacy by being "both like and different from" their peers (Ma et al., 2019). Sotheby's adopted disruptive technologies as technological-driven new ventures, meanwhile gaining competitive advantage by accessing existing resources. On the one hand, specialists were recruited to conduct digital experiments. Application of novel technology normally presents pragmatic challenges, (Dehler-Holland et al., 2002), such as lack of know-how. While new ventures have limited access to resources (Zimmerman & Zeitz, 2002), Sotheby's was capable of recruiting top technology specialists to assist in its transformation. For instance, as a new player in NFT auctions, Sotheby's collaborated with London-based artist Robert Alice as co-curator, specifically aimed at promoting blockchain culture within the digital arts.

On the other hand, Sotheby's mitigated the risk of applying novel technologies by providing clear distribution of benefits (Campbell-Verduyn et al., 2020), catering to investor's expectations of them being a responsible organization. For instance, in the art market artists face challenges in being appreciated or recognised in sales over time (Robertson, 2011). The NFTs market paradigm "push[es] back on the promise of royalties-in-perpetuity" for artists (Sotheby's, 2023b). Sotheby's, by contrast, "bucked the trend" and applied Metaverse to pay for artists' royalties (Sotheby's, 2023b).

In response, novelty-seeking investors were keen to download and explore Sotheby's novel initiatives. When augmented reality and virtual reality features was embedded in their mobile application, Sotheby's recorded a 38% increase in page views (Sotheby's, 2019, p.11). Despite live auctions ceasing during the COVID-19 global pandemic, Sotheby's launch of live-stream only auctions (2020) and the NFT marketplace (2021) resulted in an increase of over 30% in new bidders, over 30% in buyers under 40 (Sotheby's, 2020), and 92% of total bids occurring online in 2021 (Sotheby's, p.4). By cultivating opportunities to adopt disruptive technologies, Sotheby's created a digital narrative that attracts "attentional resources" from investors, with whom Sotheby's fostered a "shared sense of meaningfulness" (Zhao et al., 2023).

2.6 Discussion

In essence, whether an organization is perceived as legitimate or not is in the eye of the beholder, in this case the art investor (Ridgeway & Berger, 1986). Established organizations, in response, adopt certain structures, behaviours, and practices align with expectations of investors (DiMaggio & Powell, 2000). In the digital era, investors' perceptions are formed not only by how an organization operates, but also by the changes in the market, such as the emergence of technology-driven new ventures, transparent and accessible initiatives

announced by its competitors, and market evolution induced by disruptive technologies. Maintaining legitimacy, thus, involves ongoing attention to anticipate, respond to, and remove barriers (Reay et al., 2006), providing resolutions when challenges occur.

In the digital era, transparency has become a minimal standard of accountability (Smythe & Smith, 2006). For renowned organizations operating for centuries, such as Sotheby's, regulators and investors presume it is regulatorily legitimate, unless illegal actions surface (Deephouse, 1996). Breaching trust to investors leads to questions about credibility of organization practices, and whether the organization is acceptable and appropriate. Such questions and criticisms can lead to substantial cutbacks in investor support (Markard et al., 2016). Thus, when an organization's regulatory legitimacy is challenged, organizations need to decouple illegitimate activities, such as tax fraud and price fixing, from other legal and legitimate practices (Elsbach & Sutton, 1992). To do so, limited increases in transparency are an insufficient response and fall short of what is needed to overcome regulatory challenges (Bernstein & Hannah, 2008). Under these circumstances, legitimacy is maintained by disclosing the organization's regulatory practices to investors, by conveying the efforts and outcomes in resolving the illegitimate actions and disclosing other regulatory practices that align with investor expectations.

Forming partnerships with other established organizations stimulates legitimacy recovery. The accrual of legitimacy is seen not only as a process that occurs in isolation, affecting the organization in question, but spills over to affect other related organizations (Kuilman & Li, 2009). When Sotheby's and Christie's illegitimate price-fixing scandal was exposed to investors, the legitimacy of other organizations operating in the art market was affected. Therefore, when regulatory legitimacy is potentially or already at risk, legitimacy is maintained by collaboratively engaging with external parties beyond the market context

(Desai, 2018), for instance, by forming strategic partnerships with web-based companies to gain legitimacy spillover.

While being transparent and legal is a minimal legitimacy standard, in the art market, investors seek not only transparent information, but also participation, and return on investment from established organizations (Whitaker & Kräussl, 2020). To overcome these pragmatic challenges, especially in times of financial crisis or a global pandemic, online technology is used to provide investors with an expected level of accessibility, thus providing them with otherwise unavailable opportunities.

While internet and online technologies provide global investors with information and accessibility to art auctions, the emergence of technology-driven new ventures in the art market, raises investors' expected standards of accessibility and novelty. To overcome such cognitive challenges, established organizations cultivate opportunities by experimenting with novel technologies, where they have two inherent advantages. First, the broader and more diverse investor base in established organizations leads to more differentiated expectations. In the art market, some investors appreciate the aesthetic value of art, while others prioritise the possible financial return art investment generates. The more differentiated these expectations, the more likely power and prestige order will be treated as legitimate (Ridgeway & Berger, 1986; DiMaggio & Powell, 2000), and technological innovations will be viewed as appropriate and proper.

Second, in the art market where resources are limited, established organization have access to resources unavailable to new ventures, including financial stability, established partnerships, an existing investor base, and access to know-how. For instance, in the art market, existing auction platforms are centralised and depend on third-party intermediaries (i.e., banks) for transaction settlements (Chen et al., 2018). For novel online platforms

lacking historical operation records, concerns are raised regarding data integrity, security, transparency, and traceability as potential investors have to trust the online venture for legitimacy of transactions (Omar et al., 2021).

2.7 Conclusion

Findings suggest that in the art market, legitimacy is maintained by decoupling illegitimate actions, disclosing legitimate efforts, and partnering with organizations beyond the art market, especially web-based global innovators. Investors' pragmatic expectations, such as accessibility to art investment services, could be addressed by expanding the organization's global presence and fostering client relationships. Meanwhile, investor expectations do not remain constant, but rise along with the emergence of novel business models. When cognitive acknowledgement toward to the organization is challenged, an established organization can leverage its inherent advantage in accessing resources and experimenting with technologies to cultivate opportunities.

This research further answers the call from Tost (2011) on exploring the micro-level dynamic of legitimacy, which is understanding the nuances of an innovation, such as the role technology plays in maintaining legitimacy with investors. Although the research focuses on a single case and findings may not be generalisable, there are transferable implications of the findings. First, by conducting a longitudinal analysis on Sotheby's over two decades, legitimacy maintenance is an ongoing effort requiring evaluation and reaction to the organization's external environment. Second, the study presents how an auction house can overcome legitimacy challenges as an established organization. By keeping pace with the emergence of novel art organizations, future research could examine how legitimacy is achieved in new art ventures, and investigate the rationale and outcome of art investment via novel art intermediaries, such as art securitisation platforms.

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Chapter 3 Leveraging Entrepreneurial Identity and Technology: Legitimacy of Art Securitization Platforms

3.1 Abstract

The paper investigates how online platforms achieve legitimacy in the context of art securitization. Art securitization platforms are new ventures in the art market that leverage blockchain technology to enable fractional ownership of art, thereby increasing liquidity and accessibility for online investors. While traditional art market intermediaries, such as auction houses Sotheby's and Christie's, face legitimacy challenges like price-fixing issues, new intermediaries, such as art securitization platforms, require legitimacy with investors in order to secure a primary source of stability and survival in the art market. This study investigates how four leading art securitization platforms, *Maecenas*, *Masterworks*, *Otis* and *Artory* achieve legitimacy with investors in the art market. We analyze both the art securitization platforms' 6,306 social media posts to decode their legitimacy-achieving approaches and draw on the positivity of 2,510 post comments to measure how their legitimacy is perceived by investors. Our findings suggest that highlighting technological distinctiveness and entrepreneurial identity aids art platforms in achieving legitimacy, despite raising concerns among conservative investors. Positive legitimacy judgements are also awarded by investors to platforms that conform to stakeholders' expected levels of return, transparency, and security.

Keywords

Blockchain, Technology, Art Securitization, Online Platform, Legitimacy, New Venture

3.2 Introduction

Blockchain technology, a means by which individuals or machines transfer value across the internet (Antonopoulos, 2016; Werback, 2018), is influencing the way artworks are traded and consumed in the market (Massi, Vecco & Lin, 2020). Rather than using traditional art distribution channels (e.g., art galleries, auction houses), investors have turned to blockchain-enabled channels, such as art securitization platforms, to invest in art via the internet in a decentralized manner. These platforms facilitate the securitization of art ownership in the form of art shares, representing investors' fractional ownership of artworks. By enabling online consumption and transaction of art shares, art securitization platforms have the potential to democratize art market access to wider constituencies of investors including those who otherwise could not afford, or have never learned about, art investment.

The art market has been deemed to be highly segmented with market dominance exercised by large auction houses, e.g., Sotheby's and Christie's (Robertson, 2005; Ashenfelter & Graddy, 2020). For centuries, investors regarded auction houses as the primary channel of art investment, with their potential to generate positive returns and reduce the total risk of investment portfolios (Campbell, 2008; Lee & Veld-Merkoulova, 2011). However, transparency and accessibility issues can arise when auction bidders are anonymous, and art transactions occur 'behind-the-scenes' (Robertson, 2005). Auction houses default to wealth as the key factor when profiling potential bidders, and exclusively serve 'high net individuals' from the 'entrepreneurial super-rich' class (Satchell, 2009; Renneboog & Spaenjers, 2013). Shortly after the commencement of the new millennium, a price-fixing scandal between the chairs of Sotheby's and Christie's led to a public trial and a fine of US $45 million (Department of Justice, 2001). The scandal called into question the legitimacy of both art auction houses. Thus, art investors may seek more affordable, transparent, and liquid means of art investment, such as art securitization.

Legitimacy is a perceptual phenomenon that concurs "a taste, assessment, or judgment of the appropriateness of an organizational product, practice, or characteristic" (Bitektine, 2011). As entrants to the long-existing art market, being perceived as legitimate can enable art securitization platforms to compete with formal gatekeepers such as Sotheby's and Christie's for resources (Suchman, 1995), thereby overcoming the stigma of newness (Singh, Tucker & House, 1986), and increasing their "otherwise limited chances for survival" in the auction-dominated market (March, 2013). Art securitization platforms have the potential to accommodate art investors' new demands for transparency and accessibility by reducing the investment threshold (e.g., by means of art shares priced as low as $10 each), enabling flexible and fractional art ownership, and the public disclosure of transaction records. However, the question remains as to how online art platforms, such as art securitization platforms, can achieve legitimacy with investors.

This study investigates how all four operating art securitization platforms (*Maecenas, Masterworks, Otis,* and *Artory*) achieve investor legitimacy. We examine these platforms' 6,306 social media posts on LinkedIn, X(Twitter), Instagram, and Facebook to understand how each platform achieves legitimacy by two prevalent approaches: distinctiveness and conformance to norms. We then analyze 2,510 investor comments to understand how the platforms' legitimacy is perceived by investors, by assessing the comment positivity as a measure of legitimacy. Our findings suggest that highlighting technological distinctiveness and entrepreneurial identity aids art securitization platforms in achieving legitimacy. Positive legitimacy judgements are also awarded by investors to platforms that conform to norms of stakeholders' expected levels of return, transparency, and security.

The study makes two novel contributions. First, it challenges the prevailing verdict of art securitization as a risky, costly, and unregulated means of investment (McLean, 2008; Zhang, 2019). Rather, art securitization platforms can survive, grow, and be perceived as

legitimate by investors. Second, this study challenges the underlying assumption that distinctiveness counteracts the attainment of legitimacy (DiMaggio & Powell, 1991; Navis & Glynn, 2011). Instead, we argue that even without conformance to norms, applying novel technology and forming a distinctive entrepreneurial identity can convince investors.

The remainder of this paper is structured as follows: first, we review the concept of legitimacy in art investment. Next, we explore the importance of achieving legitimacy with investors for art securitization platforms, along with potential approaches for its realization. Third, we provide an overview of four art securitization platforms as new ventures in the art market, and present the setting, data and methods applied in the study. This section is followed by the findings, discussion, suggestions for future research, and the conclusions.

3.3 Literature Review

3.3.1 Legitimacy in Art Investment

Fine art is considered an extreme case of a heterogeneous commodity with a non-augmentable aggregate supply (Frey & Eichenberger, 1995). Gerlis (2014) conducts a focused comparison between fine art and six other types of alternative assets. He concludes that unlike the luxury goods and wine industries, which must actively stimulate demand for their products, the uniqueness of fine art attracts a "mass-market audience" naturally. Although artwork has historically been regarded as a risky investment in a portfolio (Pfeffer, 1972), art investment offers distinctive sources of returns. Investors may purchase art not simply in anticipation of price increases but to diversify their investment profiles (Lee & Veld-Merkoulova, 2011), hedge stock market risks (Campbell, 2008) and realize non-financial "aesthetic and psychic" returns (Worthington & Higgs, 2003). Mei and Moses (2002) examine data from over 80,000 repeat auction sales, demonstrating that art exhibits lower volatility and correlation with traditional financial assets. Subsequent empirical studies,

drawing on a broader range of auction data, identify negative correlations between fine art and other asset classes (Potocki & Rogozińska, 2015).

While competitive advantages do exist in art investments compared to financial assets, issues surrounding legitimacy remain. For centuries, art auctions have been the prevailing channel of art investment, beyond which transactions of only "less valuable art pieces for speculators to speculate on" occur (Robertson, 2005, 267). In art auction settings, auction houses negotiate reserve prices with sellers, and then start bidding 'low', progressing to the highest offers from investors. The key participants are buyers (bidders), sellers, and auction houses. Sotheby's and Christie's, the two giant auction houses, dominate the art market and possess power to negotiate reserve prices, organize auctions, and profile investors. These practices raise concerns regarding transparency and accessibility, which are central to perceptions of legitimacy.

Lack of Transparency is a limitation that undermines the legitimacy of the art auction market (Prieto-Rodriguez & Vecco, 2021). Using art auction records, previous studies examine predictors of artwork prices and the impact of behind-the-scenes on hammer prices. The reserve price of an artwork and the timing of auctions can be manipulated to generate greater premiums (Ginsburgh & van Ours, 2007; Chai, Peng & Yu, 2016). Factors such as exceeding valuation prices (Coslor, 2016), presence of a celebrity (Gray, 2020), and positive remarks from the auctioneer (Bianchi, 2015) can all induce higher hammer prices.

Lack of Accessibility also limits the legitimacy of art auctions. Previous studies suggest that only high-value, top-end pieces created by masters are worth investing in (Singer & Lynch, 1997; Lee & Veld-Merkoulova, 2011). These artworks are often withdrawn from public circulation and traded exclusively through auction houses. Reid (2004) evaluates return on artworks in different price ranges and advises art investors "to be very conservative and pay for quality" (p.251). The same conclusion is reached by Korteweg, Kraeussl and

Verwijmeren (2016), who examine the transaction records of a larger sample of 32,928 auction-level artworks. In addition, the opaque nature of the art market leaves general investors with limited means confused (Coslor, 2016), and excluded from the art auction market. Thus, art auctions serve as an exclusive art investment opportunity for high-net-worth individuals.

In response to the legitimacy limitations faced by traditional auction houses, other platforms, such as online art marketplaces, have emerged. Most marketplaces, however, fail to supply investment-worthy artworks. Highfill and O'Brien (2007) conduct a comparative analysis between art auction indices and artwork transactions on eBay, concluding that art sold on eBay is not investment-worthy but rather a consumption good they refer to as "sofa art". The later emergence of art securitization platforms, however, offers an alternative investment channel by leveraging blockchain technology to increase transparency and accessibility. These platforms provide viable opportunities to invest in high-value, top-end pieces created by masters, making art investment affordable to individual investors. It remains unclear whether investors perceive these platforms as legitimate and how the platforms achieve legitimacy with investors.

3.3.2 Legitimacy of Art Securitization and Blockchain Technology

Asset securitization has been a primary means of capital formation (Coval, Jurek & Stafford, 2009; Kothari, 2012). In practice, securitizing assets, including corporations, funds, and real estate properties, reduces investment thresholds and expands access to broader populations of investors. Securitization has recently been extended to artwork, with art securitization ventures in China established since 2009. State-owned art securitization platforms, such as Shanghai Culture Asset and Equity Exchange (SCAEE, est. 2009), Tianjin Cultural Artwork Exchange of China (TCAEC, est. 2009), Shen Zhen Cultural Assets and Equity Exchange (SZCAEE, est. 2010), and South Cultural Equity Exchange (SCEE, est. 2010) were

established, but soon closed due to government intervention. Meanwhile, the demand for fractional art ownership has led to the emergence of art exchanges in Paris (Mackay, 2011), Luxembourg (Ferro, 2012), St. Louis (Tully, 2012) and London (Geller, 2014). These art securitization platforms "open up the world of art investing to people who may never have thought it possible" (McLean, 2008, p.651). However, discussions around art securitization platforms across the literature are limited, only focusing on two areas: first, reasons for early failure and second, innovative patents.

Three studies examine different failed cases of art securitization. McLean (2008) identifies three impediments to art securitization including copyright issues, technical obstacles, and information asymmetry. Zhang (2019) conducts a single case study on the Tianjin Cultural Artwork Exchange of China, an art securitization platform abolished by the government in 2010. He points out "lack of legal basis", "lack of government supervision", and "changeable trading rules" as three causes of the failure. Investigating the same case, You (2011) identifies technological issues as barriers to art share transactions.

Recent advancements in blockchain technology offer a possible solution to these barriers. The core idea of blockchain technology is a ledger of time-stamped information, which exists in many interconnected copies (Whitaker, 2019). Blockchain alters the power dynamic around information, as it removes the need to trust a central authority (Nakamoto, 2008). Blockchain evolution, therefore, induces a trend of disintermediation, where service and product suppliers can transform themselves from operating through traditional distribution channels (i.e. agents and wholesalers), to screening, communicating and trading with customers directly through the internet. For instance, blockchain is applied to track the authenticity, provenance, and movement of products in the supply chain sector (Harwood & Eaves, 2020); to secure patient data in the healthcare industry (Agbo et al., 2019); and to

utilize smart contracts to simplify transactions and mitigate fraud in the real estate industry (Schlecht, Schneider & Buchwald, 2021).

Blockchain technology is transforming the ecosystem of the art industry changing the way artworks are traded and consumed. Blockchain provides a secure and transparent way to record the provenance, ownership, and authenticity of artworks, offering an opportunity to address forgeries and fraud (McConaghy et al., 2017). The art market has begun to experiment with smart contracts to establish ownership, issue usage rights, and trace deliveries and transactions (Hasan & Salah, 2018) with the rapid emergence and evolution of online arts entrepreneurship. This development enables platforms such as *Verisart* and *Codex Protocol* to create digital certificates of artwork authenticity, reduce transaction risks, and provide art investors with comprehensive information (e.g., on artists, former collectors, transactions) on the artworks they offer.

In the art market, blockchain's potential to democratize art investment through tokenization and securitization enhances accessibility. Non-fungible tokens (NFTs) constitute the main application of blockchain in the art market. NFTs are special types of tradable securities that enable the monetization of all types of assets (Abbate et al., 2022). NFT trading platforms, such as *OpenSea* and *Rarible*, have revolutionized investment in digital art by allowing artists to sell and trade digital artworks with verified ownership and limited editions, thereby addressing the issue of digital art replication (O'Dwyer, 2020). Meanwhile, by enabling fractional ownership of high-value artworks, blockchain allows a wider constituency of investor to participate in the art market (Whitaker & Kräussl, 2020), and to profit from art investment (Liu, Lee & Rentschler, 2025).

Art securitization platforms founded after the emergence of blockchain technology support the division of high-value physical artworks into fractional shares and provide a secure and transparent market to acquire and trade art shares. Blockchain-enabled platforms

have rekindled art market confidence through the art securitization mechanism. Shin (2016) invents a patent of crowd funding method targeting the contemporary art market, and identifies art securitization as a crowdfunding mechanism through which to support contemporary artists. Ji and Yang (2020) combine blockchain technology with art securitization and identify tokens as a potential instrument for reducing art securitization transaction risks. With patents, emerging online art securitization platforms have made changes, learning from previous failures. There is no existing research which explores whether or not these art securitization platforms are legitimated by art investors.

3.3.3 Legitimacy of Art Securitization Platforms

Lack of legitimacy is crippling for new ventures including art securitization platforms, particularly within an entrepreneurial ecosystem that develops a radical new technology or seeks to disrupt a long-existing market (Aldrich & Fiol, 1994; Navis & Glynn, 2011). For new ventures to achieve legitimacy, literature suggests two different and divergent approaches: conformance to norms and conveying distinctiveness.

New market entrants often achieve legitimacy by conforming to pre-existing norms. A new venture that conforms does not question, change, or violate existing structures, but rather "follows the rules" (Suchman, 1995). Examples of such norm-conforming practices include articulating partnerships with established organizations (e.g., Girschik, 2020); being a member of a known class or industry (e.g., Meyer & Rowan, 1977; Tost, 2011); conforming to stakeholder expectations, such as investors' expected levels of return (e.g., Henisz & Zelner, 2005) and taking advantage of knowledge and resource spillover in the industry (e.g., Jolly & Hansen, 2022). While the effectiveness of each norm-conformance effort varies across contexts and industries, the legitimacy of art securitization platforms may be assessed favorably when investors recognize alignment between an art securitization platform's practices and art market norms.

Organizations, however, may also achieve legitimacy by conveying distinctiveness. A growing body of research highlights the concept of "optimal distinctiveness": new ventures need to be distinctive from their peers to stand out (Taeuscher, Bouncken & Pesch, 2021). Organizations may seek to offer novel products and services that shock, violate, and contradict existing norms. Art securitization platforms may deviate and differentiate their practices from existing art market intermediaries (e.g., art auction houses) in order to be perceived as legitimate by investors. Literature suggests two means of doing so: adopting novel technology and innovation (Elston & Audretsch, 2011) and forming a distinct entrepreneurial identity (Fauchart & Gruber, 2011).

Adopting novel technology aids organizations in achieving legitimacy. New ventures are handicapped by a "liability of newness" due to a lack of performance history (Aldrich & Fiol, 1994), which can be overcome by introducing novel technologies, by developing innovative business models that give rise to new market categories (Christensen, 1997), and by leveraging technology to create new social contexts (Zimmerman & Zeitz, 2002; Weinberg et al., 2021). In the art market, adopting novel technology is not a rare phenomenon: artists adopt social media for self-branding (Samdanis, 2016); and art galleries display and trade artworks on their websites (Lee & Lee, 2023). Recent studies highlight blockchain's potential to address transparency, accessibility, and security issues in the art market, and as "a very promising technology for the development of decentralized and resilient security solutions" (Hammi et al., 2022, p.2).

Forming entrepreneurial identity, including the entrepreneur's own, also serves as a source of legitimacy (Fisher, Kotha & Lahiri, 2016; Taeuscher, Bouncken & Pesch, 2021). At the organizational level, identity defines what is "central, distinctive, and enduring" (Albert & Whetten, 1985). Meaningful identity enables audiences with high novelty expectations to connect with the organization, understand their unique role and purpose (Whetten, 2006), and

tolerate ambiguity (Kahn, 1995). New ventures such as art securitization platforms may leverage identity claims to highlight what is novel and different, thereby reinforcing their distinctiveness (Albert & Whetten, 1985). At the individual level, stories about the entrepreneurs' personal identity, educational background, working experience, and social interaction further help to create the distinct identity of the organization (Gioia, 1998; Lounsbury & Glynn, 2001).

There is however little research on how conformance to norms and distinctiveness approaches impact investors' legitimacy judgments; and whether adopting novel technology and forming entrepreneurial identity help new ventures achieve legitimacy. In this paper, we therefore examine the research question: *how do art securitization platforms achieve legitimacy with investors?*

3.4 Data & Methods

3.4.1 Sample Selection

We select four art securitization platforms for our study, *Maecenas*, *Masterworks*, *Otis*, and *Artory* for the following reasons. First, to the best of our knowledge, the selected art securitization platforms are the only ones operating as of October 2023 with publicly accessible social media channels. Another nine platforms either closed before the emergence of blockchain technology due to government intervention (e.g., *Shanghai Culture Asset and Equity Exchange*; *Chengdu Cultural Equity Exchange*; *Shenzhen Cultural Assets and Equity Exchange*; *South Cultural Equity Exchange*; *Zhengzhou Cultural Art Exchange*) or announced their establishment but failed to securitize artworks and disclose further information (e.g., *Tianjin Cultural Artwork Exchange of China*; *A&F Markets*; *SplitArt*; *Mintus*). As the four cases together constitute the extant population of art securitization platforms, studying their legitimacy-achieving strategies offers an opportunity to reveal an industrial phenomenon (Rentschler, Fillis & Lee, 2022). Second, the selected platforms target

different markets and apply various approaches to achieving legitimacy. Cases selected from diverse settings and contexts allow us to identify phenomena common to the entire population and to generalize theoretical approaches to achieving legitimacy in the art market (Miles & Huberman, 1994). Third, selecting four cases allows for a comparation of different legitimacy-achieving approaches across platforms, in line with the number of cases recommended by Stake (2006).

Table 1 presents an overview of the four online art securitization platforms, listed in order of establishment date. As Table 3.1 illustrates, all four art securitization platforms were established after 2016, and are headquartered in New York or London, the geographical centers of art investment (Robertson, 2008). Although all platforms focus on securitizing paintings as their primary genre, they differ in terms of minimum investment, company size, and the artworks they release.

Table 3.1 Art Securitization Platforms

	Maecenas	**Masterworks**	**Otis**	**Artory**
Founded	2016	2017	2018	2019
Founder	Federico Cardoso & Marcelo García Casil	Scott Lynn	Michael Karnjanaprakorn	Nanne Dekking
Headquarters	London	New York	New York	New York
Overseas Office	Singapore	N/A	N/A	Berlin, Bangkok
Artwork Securitized*	2	161	125	65
Asset Class	Painting	Painting	Painting & Other collectibles	Painting
Minium Investment	$5,000	$1,000	$20	$10,000
Employees	10+	255	71	10+

*Artwork Securitized** records artworks successfully securitized as of 10 October 2023. Data sourced from the platforms' official websites.

Maecenas

With a mission to "democratize access to fine art", *Maecenas* was founded in 2016 to securitize paintings and allow secondary trades of fractional art ownership. In September 2018, Maecenas successfully securitized its first painting *14 Small Electric Chairs* by Andy Warhol to over 100 investors across 56 countries. Since then, four more paintings by contemporary artists have been securitized by *Maecenas*. A notable feature of *Maecenas* is its wide acceptance of payment methods. In addition to fiat currencies such as USD and GBP, cryptocurrencies such as Bitcoin and Ethereum are accepted by *Maecenas*.

While *Maecenas* offers a less diversified portfolio of artworks compared to *Masterworks*, *Otis*, and *Artory*, its marketplace is also less transparent. *Maecenas*' securitized artworks are vaguely described as "valuable masterpieces" created by "proven successful artists" (Maecenas, 2020), while the transaction records of art shares are available to its investors exclusively. As of 19 August 2020, the date of *Maecenas*' latest social media update, investors questioned "Is the project still alive?" (Maecenas, 2020), raising concerns about the platform's survival and legitimacy.

Masterworks

Founded in 2017 in New York, *Masterworks* is deemed reliable, with "a solid track record of choosing profitable artworks" (Folger, 2024). The platform purchases blue-chip paintings (e.g., paintings by Andy Warhol, Yayoi Kusama, and Keith Haring), registers each painting under the U.S. Securities and Exchange Commission (SEC), and then securitizes ownership in the form of art share. *Masterworks* then releases art shares to investors at a cost of $20 per share. Once all shares of a painting are acquired, *Masterwork*'s marketplace allows the trading of art shares among investors. As of October 2023, *Masterworks* has attracted 883,202 global investors, securitized 161 artworks, and successfully resold 18 securitized

artworks. The resold artworks realized an annualized net return ranging from 9.2% to 77.3% (Masterworks, 2024).

Compared with other art securitization platforms, *Masterworks* is considered expensive with a 1.5% transaction fee charged for any art share transaction, and another 1.5% annual account fee. When the artwork is resold, *Masterworks* charges a 20% commission fee on profits. *Masterworks*' exclusivity is evident from the interview process it conducts with investors. Before investors can purchase their first art shares, financial advisors at *Masterworks* conduct one-on-one phone interviews to screen investors' backgrounds and provide advice on suitable artworks.

Otis

Founded in 2018 in New York, *Otis* created what they deem 'The Stock Market for Culture' (Otis, 2024). Investment in *Otis* is restricted to US residents over 18-year-old with a bank account. In order to democratize investment opportunities for smaller investors, *Otis* welcomes non-accredited investors (without large net worth) to purchase art shares at US$10, which is the lowest investment threshold of all the platforms investigated. As with *Masterworks*, investing with *Otis* is not free. The platform charges a sourcing fee of 0-10% and a 1% broker-dealer fee on all transactions, in addition to taking a 10% cut of profit from art share sales.

Compared with other art securitization platforms, *Otis* allows investors to purchase and trade fractional ownership of sculptures, sneakers, comics, and other collectibles as well as paintings. In 2022, *Otis* was purchased by *Public*, a New York-based platform for fractional investing in stocks and alternative assets founded in 2019. Following its acquisition, *Otis*' investors continue to trade their art shares on *Public*'s marketplace as of March 2024.

Artory

Unlike *Masterworks*, *Otis* and *Maecenas* which feature art securitization as their core business, *Artory* treats art securitization as a secondary activity, focusing primarily on building and maintaining a blockchain-based art database. Founded in 2016, *Artory* positions itself as a pioneer in "immutably recording artwork information on the blockchain" (Artory, 2024), and worked exclusively with private clients and businesses until 2019.

Artory distinguishes itself with its comprehensive partnership offering. In 2018, *Artory* partnered with Christie's to register all transactions from the Barney A. Ebsworth Collection on blockchain, making Christie's the first auction house to record art transactions on blockchain. In 2019, *Artory* established a joint venture with *Winston Art Group*, an art appraisal and advisory firm which specializes in art investment. In 2021, the joint venture began offering art securitization services to registered clients.

While *Artory* does not disclose information about securitized artworks publicly, the company claims to have successfully securitized around 60 artworks valued at US$1.5B (Artory, 2024). With a minimum investment of US$10,000, individual investors are eligible to register and purchase art shares regardless of their nationality. Despite the highest financial threshold required for investor registration of all art securitization platforms, *Artory* still offers individual investors a more affordable investment platform than traditional auction houses.

3.4.2 Data Collection

We draw on social media posts and comments to understand how each art securitization platform achieves legitimacy with investors. Social media refers to technology-facilitated dialogue conducted through channels such as blogs, content sharing social networking and social bookmarking sites (Reilly & Hynan, 2014). Organizations use social media to disclose their operations and achievements (Manetti & Bellucci, 2016), engage in conversations (Manetti et al., 2017), and receive real-time feedback and judgements from stakeholders

(Suddaby et al., 2015), including investors. Consequently, social media has been adopted as a tool for legitimation. Organizations seeking investment, especially initial investment, can leverage social media for information disclosure and dialogue with investors to attain legitimacy (Lundmark, Oh & Verhaal, 2017; Lodhia, Kaur & Stone, 2020).

In response to social media posts, investors leave comments under social media posts, blogs, and tweets to share their perceptions. The comments, also defined as electronic word of mouth (eWOM) (Basuroy et al., 2020; Baldin et al., 2023), stimulate investors' ongoing discussion and debate about an organization, and constitute an indicator of organizational legitimacy (Hudson, Okhuvsen & Creed, 2015; Etter et al., 2018). Since a selected sample of comments may not provide a comprehensive picture (Qu, Zhang & Li, 2008), in this study, we record every comment from all social media channels used by the art securitization platforms, namely, LinkedIn, X(Twitter), Instagram, and Facebook. These data are publicly available and are collected fortnightly from 2021 to October 2023. However, when we revisited the social media pages in 2024, some investor comments under social media posts (e.g., negative comments, comments with offensive or abusive language) had been removed from the public realm, making our dataset unique.

As shown in Table 3.2, this study examines 6,306 social media posts from LinkedIn, X(Twitter), Instagram, and Facebook to analyze each art securitization platform's legitimacy-achieving approaches, and the investor comments received. Panels A and B present the posting date of social media posts from May 2016 (when *Artory* first posted on Facebook before official establishment) to October 2023, when *Masterworks* announced its temporary closure. Panel C reports the number of followers of each art securitization platform. *Masterworks* has the highest number of followers, followed in order by *Otis*, *Maecenas*, and *Artory*. In terms of social media channels, *Maecenas* has the most followers on Facebook (38.23%), followed by X(Twitter) (33.20%), and Instagram (22.57%). *Masterworks* has the

largest following on LinkedIn (37.23%) and Instagram (33.13%). The majority of *Otis* followers are on Instagram (61.27%), while *Artory* has the largest following on LinkedIn (42.73%). As presented in Panel D, the number of posts made by each art securitization platform is broadly comparable, with *Masterworks* posting most and *Otis* least. *Maecenas* posts primarily on X(Twitter) and Facebook, where they have the most followers. *Masterworks* focuses on Instagram, despite having the most followers on LinkedIn. *Otis* posts most frequently on X(Twitter), even though their largest follower base is on Instagram. *Artory* also posts mainly on X(Twitter), despite having more followers on LinkedIn. Based on the comments collected, after excluding those containing fewer than three words or consisting solely of emojis, our final dataset comprises 2,510 comments, with an average length of 32 words per comment. The number of valid comments is significantly higher for *Masterworks* and *Otis*, than for *Maecenas* and *Artory*.

3.4.3 Data Analysis

We conducted a three-stage content analysis following narrative strategies, which allowed us to construct detailed stories from raw data (social media posts and comments) (Langley, 1999). Our aim was to understand the efforts and outcomes of art securitization platforms in achieving legitimacy, not through formal propositions, but by providing "vicarious experience" and "thick description" of a real-world setting in all its richness and complexity (Lincoln & Guba, 1985). The first stage involved coding of the social media posts. Starting with a literature review of legitimacy-achieving approaches, the lead author manually reviewed the textual content of each social media post twice, identifying, and then coding posts that reflected legitimacy-achieving approaches. As suggested by Lincoln and Guba (1985), a second author then reviewed the coding against the defined list to ensure credibility and consistency of coding.

Table 3.2 Social Media Posts and Comments of Art Securitization Platforms
Panel A) First Social Media Post by Social Media Channels

First Post	Maecenas	Masterworks	Otis	Artory
LinkedIn	May 2017	Jan 2018	N/A	Apr 2018
X(Twitter)	8 May 2017	17 Feb 2020	8 Mar 2021	14 Nov 2018
Instagram	24 Jul 2017	11 Oct 2017	26 Nov 2019	18 May 2019
Facebook	19 Jun 2017	3 Oct 2017	3 Mar 2022	17 May 2016

Panel B) Last Social Media Post by Social Media Channels

Last Post	Maecenas	Masterworks	Otis	Artory
LinkedIn	May 2019	Aug 2023	N/A	Aug 2023
X(Twitter)	28 Feb 2020	10 Feb 2023	29 Sept 2022	6 Apr 2023
Instagram	15 Apr 2019	10-Oct-23	29 Sept 2022	5 Apr 2023
Facebook	19 Aug 2020	24 Nov 2022	11 Oct 2018	23 Mar 2023

Panel C) Number of Followers by Social Media Channels

Follower	Maecenas	Masterworks	Otis	Artory	Total
LinkedIn	1,490	50,673	2,796	3,389	58,348
X(Twitter)	8,240	21,703	6,058	2,348	38,349
Instagram	5,600	45,100	16,500	1,800	69,000
Facebook	9,486	18,643	1,574	394	30,097
Total	24,816	136,119	26,928	7,931	195,794

Panel D) Number of Posts and Comments by Social Media Channels

Post	Maecenas	Masterworks	Otis	Artory	Total
LinkedIn	104	379	0	23	506
X(Twitter)	660	540	552	735	2,487
Instagram	226	699	250	629	1,804
Facebook	634	293	237	345	1,509
Total Posts	1,624	1,911	1,039	1,732	6,306
Comment	**Maecenas**	**Masterworks**	**Otis**	**Artory**	**Total**
LinkedIn	55	255	0	82	392
X(Twitter)	282	310	230	31	853
Instagram	238	1,321	1,429	360	3,348
Facebook	150	71	86	8	315
Total Comments	725	1,957	1,745	481	4,908
Emoji	(67)	(315)	(76)	(31)	-489
Short Review (< 3 words)	(355)	(592)	(671)	(291)	-1,909
Valid Comments	**303**	**1,050**	**998**	**159**	**2,510**

At the second stage of theme identification, two coders regularly met to categorize group, and codify social media posts into specific legitimacy-achieving means applied by art securitization platforms. Although there is no standard for inter-coder agreement in identifying themes using qualitative approaches, we progressively integrated agreed-upon themes until we reached "theoretical saturation", at which point no additional themes were identifiable (Glaser & Strauss, 1999). We carried out multiple rounds of discussion and achieved 90% inter-coder agreement, exceeding the 85% minimal benchmark for evidentiary content in qualitative studies (Saldaña, 2021). In addition to 'conformance to norms' and 'conveying distinctiveness', we identified 'operational disclosure' as an additional theme. Table 3.3 presents the themes of the legitimacy-achieving social media posts.

At the third stage, we adopted a quantitative approach, conducting an ordered logit regression analysis to examine the effectiveness of each legitimacy-achieving approach. The *positivity of investor comments* is employed as the dependent variable to measure investor legitimacy judgments. For each comment, our measure of positivity represents the relative degree of "positive" (code= 1) against "neutral" (code= 0) and "negative" (code= -1), a measure also used by Renneboog and Spaenjers (2013) in measuring investor perceptions. We adopted art securitization platforms' *Legitimacy-achieving approaches* (tier 1 themes) as the independent variable, to capture the platforms' legitimacy achieving efforts. We regressed the positivity of investor comments on legitimacy-achieving approaches, controlling for specific *art securitization platform*, *social media platform*, and *year* of social media post.

Table 3.3 Legitimacy-Achieving Themes in Social Media Posts

	Tier 1 Theme	Tier 2 Theme
Conformance	**C1. Articulating Partnerships** (e.g., Girschik, 2020)	- Partner with art businesses (e.g., art galleries, auction houses) - Partner with investment companies (e.g., banks, consulting firms) - Partner with artists - Found joint venture
	C2. Being a member (e.g., Hannan & Freeman, 1977; Meyer & Rowan, 1977; Tost, 2011)	- Reported by mainstream media - Featured by articles - Included in industrial events (e.g., conferences, exhibitions) - Gaining industrial award
	C3. Conforming to stakeholder expectations (e.g., Suchman, 1995; Bansal & Clelland, 2004)	- Generate financial return - Enable transparent transaction - Enable secure transaction - Low investment cost - Consider broader stakeholders (e.g., artists, artwork sellers) - Engage in social activities (Black Life Matters) - Explain and address technical issues
	C4. Knowledge spillover (e.g., Kuilman & Li, 2009; Jolly & Hansen, 2022)	- Art history knowledge (e.g., artist, artwork, genre)
Distinctiveness	**D1. Technology and innovation** (e.g., Suddaby & Greenwood, 2005; Golant & Sillince, 2007)	- Blockchain application - Cryptocurrency payment - Securitize new artworks - Upgrade business model
	D2. Entrepreneurial identity (e.g., He & Baruch, 2010; Navis & Glynn, 2011; Fisher, Kotha & Lahiri, 2016; Taeuscher, Bouncken & Pesch, 2021)	- Pioneer and entrepreneurial identity - Distinct characteristics of the platform - Routines of executives (e.g., CEO, CFO, COO) - Background of executives (e.g., art investment experience, education)
Operational	**O. Operational**	- Acquire and sell artworks - Human resource updates (e.g., job vacancies, new recruitments)

3.5 Results

3.5.1 Legitimacy-achieving Approaches of Art Securitization Platforms

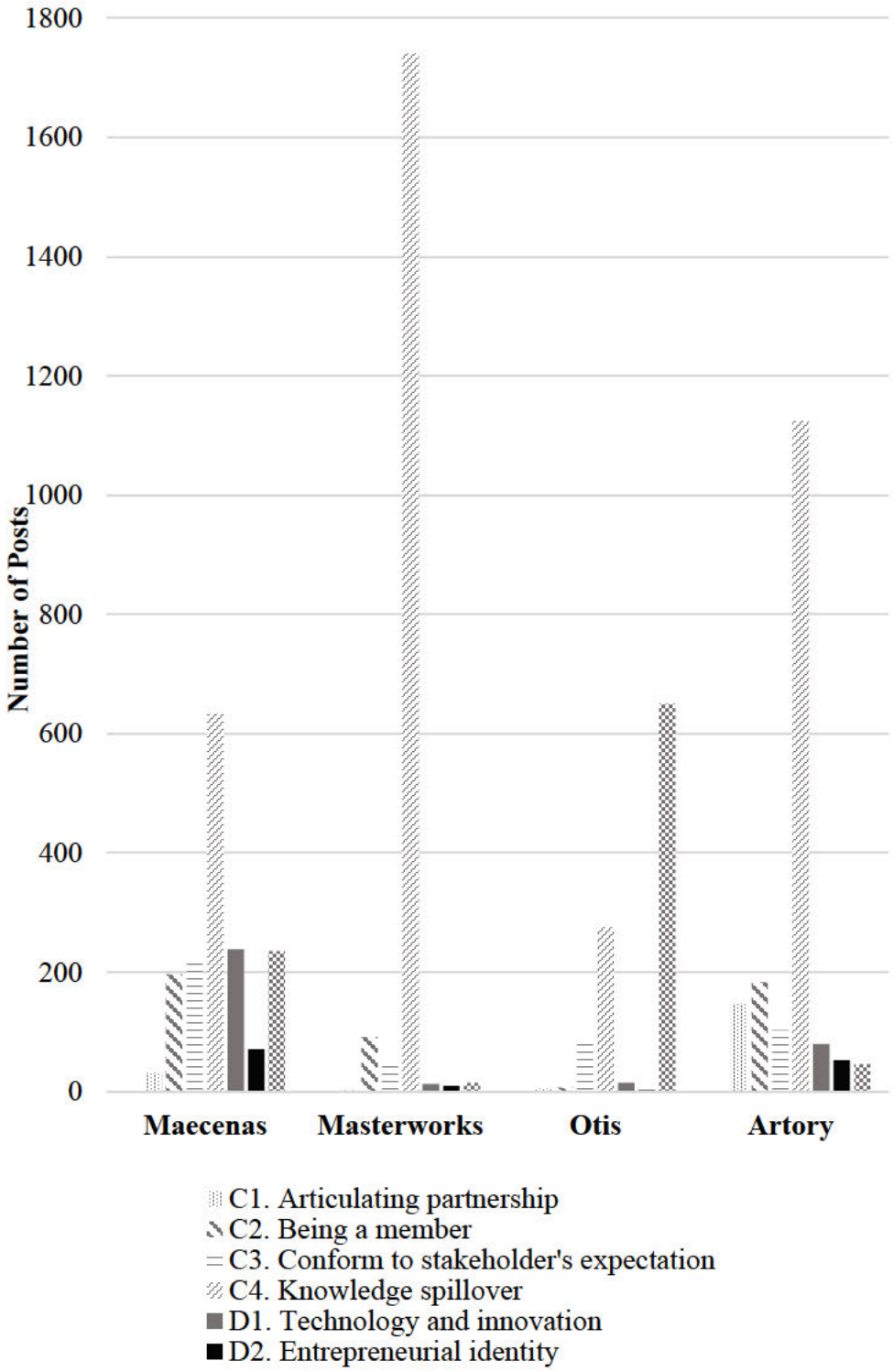
Figure 3.1 illustrates the legitimacy achieving approach adopted by each art securitization platform. While 39% of *Maecenas*'s posts share knowledge about artwork, artists, and the art market, emphasizing knowledge spillover (C4) as their main legitimacy-achieving approach, they also post about conforming to stakeholder expectation (C3) (13.60%) and being a member (C2) (12.10%). Additionally, *Maecenas*'s posts convey distinctiveness through technology and innovation (D1) (14.70%) and entrepreneurial identity (D2) (4.30%). Overall, *Maecenas* utilizes a more diverse range of legitimacy-achieving approaches than other platforms. *Maecenas* invests the most effort introducing blockchain applications and advancements, as well as on establishing its unique entrepreneurial identity as a pioneer in art securitization.

Masterworks focuses almost exclusively on sharing art history knowledge, with 91.1% of its social media posts dedicated to introducing renowned artists and artworks (C4). However, there is minimal content about its engagement in art market activities or investment returns over its seven years of operation. *Otis*, however, emphasizes operational transparency by dedicating 62.6% of its social media posts to disclosing its operational details, such as the timing of artwork releases, upcoming artworks, and human resource changes within the platform.

Artory also adopts conformance to norms as its major approach, with 8.5% of its total social media posts disclosing its partnership (C1), 10.6% introducing its membership in the art market (C2), 5.9% conforming to stakeholder's expectations (C3), and 64.9% focusing on knowledge spillover (C4). However, compared with *Masterworks* and *Otis*, *Artory* makes significant efforts to highlight its blockchain application (D1; 4.60%), as well as to

emphasize the uniqueness of the platform and its practices (D2; 3%), by disclosing the background and daily routine of its founder(s).

Figure 3.1 Legitimacy-achieving approaches of Art Securitization Platforms



3.5.2 Descriptive Statistics of Comment Positivity

Since legitimacy involves judgment of appropriateness, we use the positivity of art investors' comments on social media posts from art securitization platforms to assess their judgments of the platforms' legitimacy.

Table 3.4 reports descriptive statistics of comment positivity. Panel A presents the distribution of negative comments (denoted as -1), such as "This is another cryptocurrency fraud!"; neutral comments (denoted as 0), such as "Can you explain more about how art securitization works?"; and positive comments (denoted as +1), such as "I'm invested! I want a piece of Picasso!" received across all social media posts. Of the 2,510 comments analyzed, 35.98% are negative, 17.77% are neutral, and 46.25% are positive.

Panel B presents the comment positivity for each legitimacy-achieving approach. The positive mean value of all legitimacy-achieving approaches, except operational, confirms their effectiveness, suggesting that "any news is good news" in convincing investors. Of all approaches, investors show the highest level of positivity toward a platform's posts about distinct entrepreneurial identity, with a mean of 0.63, and technology and innovation, with a mean of 0.50.

Panel C presents comment positivity across art securitization platforms, showing that *Otis* receives the least positive comments. This may be attributed to *Otis's* strong focus on disclosing its operational activities while investing less effort in building legitimacy through social media. In contrast, *Maecenas* and *Artory*, which leverage both conformance to norms and distinctiveness approaches to achieve legitimacy, receive higher levels of positive comments by investors. Panel D shows that LinkedIn receives the most positive comments from investors, while Instagram and X (formerly Twitter) attract more negative comments. Panel E displays a potential year effect, with comments in 2020 being significantly negative, possibly due to the impact of the pandemic.

Table 3.4 Descriptive Statistics of Comment Positivity

This table presents descriptive statistics, including mean, median, standard deviation, and the percentage of observations from investors' comments on social media posts across four art securitization platforms.

Panel A) Sample Distribution of Comment Positivity

Comment	Negative (-1)	Neutral (0)	Positive (1)	Total
Frequency	903	446	1161	2510
Percentage	35.98%	17.77%	46.25%	100.00%

Panel B) Comment Positivity by Legitimacy-Achieving Approaches

Legitimacy-Achieving Approaches	Mean	Median	S. D	N	%
All	0.10	0	0.90	2510	100.00%
C1. Articulating partnership	0.38	1	0.83	80	3.20%
C2. Being a member	0.01	0	0.89	151	6.00%
C3. Conform to stakeholder's expectation	0.36	1	0.86	243	9.70%
C4. Knowledge spillover	0.30	1	0.88	1039	41.40%
D1. Technology and innovation	0.50	1	0.75	115	4.60%
D2. Entrepreneurial identity	0.63	1	0.69	59	2.40%
O. Operational	-0.32	-1	0.81	823	32.80%

Panel C) Comment Positivity by Art Securitization Platforms

Art Securitization Platforms	Mean	Median	S. D	N	%
Maecenas	0.49	1	0.81	303	12.10%
Masterworks	0.29	1	0.87	1050	41.80%
Otis	-0.29	-1	0.83	998	39.80%
Artory	0.58	1	0.75	159	6.30%

Panel D) Comment Positivity by Social Media

Social Media	Mean	Median	S. D	N	%
LinkedIn	0.53	1	0.81	258	10.30%
X(Twitter)	0.07	0	0.89	550	21.90%
Instagram	0.03	0	0.90	1539	61.30%
Facebook	0.26	1	0.90	163	6.50%

Panel E) Comment Positivity by Year

Year	Mean	Median	S. D	N	%
2018	0.46	1	0.85	289	11.50%
2019	0.20	1	0.90	261	10.40%
2020	-0.25	-1	0.86	691	27.50%
2021	0.04	0	0.90	646	25.70%
2022	0.37	1	0.81	339	13.50%
2023	0.32	1	0.85	284	11.30%

3.5.3 Effectiveness of Legitimacy-Achieving Approaches

Table 3.5 reports results of an ordered logit multivariable regression analysis on comment positivity, using legitimacy-achieving approaches as explanatory variables while controlling for art securitization platforms, social media, and year effects. By regressing two distinctiveness approaches —D1. Technology and innovation and D2. Entrepreneurial identity —separately against all other legitimacy-achieving approaches in relation to comment positivity, we confirm the positive effects of both approaches on investors' comments, as shown in columns (1) and (2), where we do not account for the effects of different art securitization platforms and social media channels. This result is further supported by column (3), which includes both approaches. Thus, regardless of the norm-conformance effect, conveying distinctiveness through introducing technology and innovation (D1, significant at the 5% level) and entrepreneurial identity (D2, significant at the 1% level) help art securitization platforms achieve legitimacy through positive comments from investors.

When we include the effects of social media channels (Column 4) or art securitization platforms alongside other legitimacy-achieving approaches in the model (Column 5), the effect of technology and innovation disappears. However, the distinctive entrepreneurial identity (D2) effect remains significant at the 5% level, with a coefficient of 0.88. While conforming to stakeholders' expectation (C3) is also significant with a coefficient of 0.56 at the 5% level, compared to the articulating partnership (C1) as a reference category, displaying a pioneering and entrepreneurial identity—along with the distinct characteristics of the platform, the routines of platform executives, and their backgrounds—remains the most effective approach for achieving legitimacy.

Table 3.5 Multivariable Regression Analysis on Comment Positivity

This table presents the results of an ordered logit regression analysis on the positivity of comments by art securitization platform investors on social media (statistical significance: *** at the 1%-level, ** at the 5%-level, and * at the 10%-level).

	(1)		(2)		(3)		(4)		(5)	
Comment Positivity (-1/0/1)	***Coef.***	***z***	***Coef.***	***z***	***Coef.***	***z***	***Coef.***	***z***	***Coef.***	***z***
C1. Articulating partnerships										
C2. Being a member									-0.09	-0.31
C3. Conform to stakeholder expectations									0.56**	1.99
C4. Knowledge spillover									0.23	0.88
D1. Technology and innovation	0.42**	2.07			0.46**	2.23	0.31	1.46	0.11	0.34
D2. Entrepreneurial identity			1.11***	3.67	1.14***	3.75	0.99***	3.19	0.88**	2.26
O. Operational									-0.29	-0.95
C1. Articulating partnerships									-0.09	-0.31
Masterworks										
Otis									-0.53***	-3.06
Artory									0.88***	4.12
Maecenas									0.78***	3.8
Instagram										
Facebook							0.25	1.44	0.04	0.23
X(Twitter)							-0.24**	-2.20	-0.64***	-5.07
LinkedIn							1.09***	6.80	0.54***	3.17
2018										
2019	-0.62***	-3.51	-0.68***	-3.88	-0.61***	-3.42	-	-3.89	-0.31	-1.64
2020	-1.56***	-10.32	-1.61***	-10.91	-1.53***	-10.11	-	-	-0.62***	-3.25
2021	-0.97***	-6.37	-1.06***	-7.12	-0.97***	-6.36	-	-5.77	-0.04	-0.21
2022	-0.27	-1.62	-0.31*	-1.85	-0.24	-1.42	-0.19	-1.13	0.24	1.2
2023	-0.39**	-2.21	-0.49***	-2.83	-0.43***	-2.46	-	-3.99	-0.52**	-2.49
Cut1	-1.44		-1.49		-1.40		-1.40		-1.02	
Cut2	-0.65		-0.71		-0.62		-0.60		-0.17	
Pseudo R^2	0.0418		0.0440		0.0450		0.0571		0.0870	

3.6 Discussion

We began this article by noting that legitimacy provides a crucial resource for the survival of new ventures in the art market. Despite its importance, little empirical research exists on how legitimacy is achieved by online businesses in the context of art securitization. We lack understanding as to whether approaches based on conforming to norms and those based on distinctiveness are effective, and whether distinctiveness approaches, such as applying novel technology and forming an entrepreneurial identity, can be effective on their own. To address this gap, we conducted case studies to understand how art securitization platforms achieve legitimacy with investors. Our findings challenge the underlying assumption that distinctiveness counteracts the attainment of legitimacy (e.g., DiMaggio & Powell, 1991; Suchman, 1995). Rather, we affirm that distinctiveness alone can contribute to an organization's achievement of legitimacy (Taeuscher, Bouncken & Pesch, 2021). New ventures, such as art securitization platforms, can achieve legitimacy with investors by both approaches: leveraging novel technologies and forming a distinctive entrepreneurial identity.

3.6.1 Blockchain Application Attracts Novelty-Seeking Investors

Art securitization platforms achieve legitimacy by effectively communicating their use of technology and innovation to investors. Contrary to the assumption that deviating from established prototypes (e.g., auction houses) reduces the comprehensibility of new ventures and prevents investors from linking new ventures to a familiar template (Navis & Glynn, 2021), we suggest that adopting novel technology alters the relationship between distinctiveness and legitimacy achievement. Art securitization platforms persuade investors of the innovative nature of their blockchain technology, with the potential to democratize art investment.

The persuasive power of blockchain application, in essence, constitutes a response to the expanding composition of art investors. As suggested by Suvajdzic, Stojanovic and

Appelbaum's (2019) study examining the impact of blockchain on the art ecosystem, art fans and followers are becoming art investors, replacing the "somewhat elitist" notion that art investors require years of training, education, and wealth. The expectations of these new investors differ from existing constituencies (Fisher et al., 2017). These novelty-seeking investors perceive the application of novel technology as pioneering and recognize blockchain as being the fastest-growing technology innovation with economic value (Chen, Wu & Yang, 2019).

Blockchain technology acts as a catalyst in achieving legitimacy with investors. In the stock market, investors exhibit higher interest in firms posting speculative announcements of blockchain implications (Cahill et al., 2020). In the art market, novelty-seeking investors show strong interest in learning, and are accepting of, how art securitization platforms apply blockchain technology to differentiate themselves from traditional auction houses. Investors grant legitimacy to art securitization platforms that demonstrate their efforts in showcasing the features of blockchain technology, announce their involvement with it, explain how blockchain generates financial return, and facilitate digital payment without commissions and delivery fees, as required by auction houses.

3.6.2 Entrepreneurial Identity Convinces Investors

Despite blockchain application attracting novelty-seeking investors, as new ventures, art securitization platforms lack objective signals (Rindove, Petkova & Kotha, 2007), and established sources of legitimacy such as realized art investment returns, or proven outcomes of blockchain applications (Aldrich & Fiol, 1994) to convey their novelty. In this setting, legitimacy is judged favorably when an art securitization platform's *entrepreneurial identity* is distinctive. A new venture's entrepreneurial identity, consisting of claims, such as "who we are", and "what we do" serves as a 'touchstone' for investor judgments (Navis & Glynn, 2011),

especially when the new venture is founded by individuals rather than teams (de Mol et al., 2020).

As recognized by existing studies, art investors regard securitization platforms as legitimate when they are informed of the capability, experience, and passion of the platforms' founder(s) and executives. When *Maecenas* and *Artory* shared their founders' experience in art collections and daily routines, many investors regarded them as "pure genius" (Maecenas, 2020) who "[are] more than qualified" (Maecenas, 2020) to apply blockchain technology, realize art securitization, and lead their platforms to success. Additionally, social media posts conveying "who we are" and "what we do" attract endorsements from trusted critics or media, which stimulates a platform's legitimization (Rao et al., 2017). For instance, Elon Musk's comment "This is interesting" on *Masterworks*' post of its art securitization procedure received more than 100 likes from investors.

While existing studies emphasize the significance of a firm's distinctiveness on its crowdfunding performance and legitimation in the finance market (Soublière & Gehman, 2020; Teauscher, Bouncken & Pesch, 2021), our research reinforces these findings; business founders should exercise passion and competence, and inform investors about the distinctiveness of their practices. Such practices conveying entrepreneurial identity mitigate tensions between platforms' lack of operational records and investors' expectations of proven performance.

3.6.3 Conforming to Stakeholder Expectations Persuades Investors

While conveying distinctiveness via blockchain application and entrepreneurial identity by itself enhances platforms' legitimacy, investors' varying backgrounds, experiences, and interests may lead them to perceive a platform's distinctiveness differently (Harmon, Green & Goodnight, 2015). Blockchain application, for instance, might be seen by some investors as innovative and pioneering, while others may view it as unreliable and doubtful. Some investors raise questions such as: Do art securitization platforms have the ability to securitize artwork

and enable art share trades, as promised? Has the platform been acknowledged and perceived as legitimate by other industry practitioners?

To address such concerns, established firms may display track records, while new ventures can signal believability and authenticity by conforming to industrial norms while also being distinctive (Bhur, Funk & Owen-Smith, 2020). For art securitization platforms, appearing legitimate and appealing requires norm-conformance efforts to generate financial returns, facilitate transparent and secure transactions, and engage in social activities. Such activities create a legitimate "safe zone" to mitigate investors' concerns (Assenova & Sorenson, 2017). Art investors are reassured that, despite being distinctive, art securitization platforms do not violate, or undermine the rules and values the art market has long upheld.

3.7 Implications, Future Research and Conclusions

Our study yields both theoretical and practical implications. First, while few studies have explored the topic of art securitization platforms, our study sheds light on this emerging research area and its potential to challenge the role of traditional auction houses. Practically, given numerous failed attempts to establish art securitization platforms beyond the four studied cases, there is an urgent need to better understand the reasons for failure. Insights into how extant and future art securitization platforms can leverage norm conformance and convey distinctiveness are crucial to their success. Our study provides empirical evidence as to the variables affecting investor preferences and decision-making, suggesting that new ventures in the art market can achieve legitimacy through distinctiveness, particularly by applying technology and innovation and developing a distinctive entrepreneurial identity.

Theoretically, our study identifies that art securitization platforms extend the art market experience to those who might not otherwise be able to afford to participate in the art market through traditional platforms. It provides evidence of how these art securitization platforms achieve legitimacy (Suchman, 1995) in a discontinuous and rapidly changing art world. By

focusing on the organizational level, our study is one of the few to challenge the underlying assumption that distinctiveness counteracts the attainment of legitimacy and to address the perceived contradiction between the two approaches (e.g., Guo, Tang & Su, 2014).

We acknowledge that our study is limited to factors influencing investors' legitimacy judgments. Future research could examine additional variables affecting investors' decision-making, such as the nature of assets and relevant policies, which would provide a more comprehensive understanding of this emerging field.

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Chapter 4 Are Art Investors Rational? Investor Sentiments and Art Returns

4.1 Abstract

Drawing on Modern Portfolio Theory (MPT) and investor sentiment theories, this study examines the association between investors' sentiment and returns in the art securitization market. To do so, we construct a novel data set comprising 16,149 art share transactions from *Masterworks*, an online art securitization platform that facilitates fractional trading of art shares. Employing ordinary least squares regression, we examine the impact of two investors' sentiments on returns in the art securitization market. The first sentiment, art investors' confidence, is quantified using the transactions volume in the art securitization market. The second sentiment, related to the COVID-19 pandemic, is measured by the incidence of new COVID-19 infections. Our findings reveal a significant yet modest positive association between art investors' confidence and art returns. Investors' reaction to the COVID-19 pandemic is similarly mirrored in art share returns. In addition, when considering investor sentiments, our findings do not signal any association between returns in art and stock markets, providing further evidence of art as a "safe-haven asset" during a crisis.

4.2 Introduction

In line with Modern Portfolio Theory (MPT), investors construct investment portfolios to minimize risk on a given level of expected returns (Markowitz, 1952). According to MPT, achieving the optimal trade-off for typical risk-averse investors entails holding a diverse array of assets with different characteristics to eliminate unsystematic or idiosyncratic risk as the key strategy (Markowitz, 1952). The theory underlines the importance of hedging market risk with multiple financial assets (Francis et al., 2013), as well as with alternative assets, such as art. Existing studies have found negative or low correlations between art and stock markets (i.e., in Edwards, 2004; Campbell, 2008; Lee & Veld-Merkoulova, 2011), confirming artworks' effectiveness in hedging market risk. This risk-hedging power of art investment is

particularly pronounced during wars (Frey & Pommerehne, 1989), financial crises (Öztürkkal & Togan-Eğrican, 2020), and economic recessions (Witkowska, 2014), when investors face especially higher levels of uncertainty and fear. Since 11 March 2020, the COVID-19 outbreak has hindered investors from making rational assessments of their investments, and has induced price volatility, short-selling, and margin trading in the stock market (Duan, Liu & Wang, 2021). In this respect, examining the impact of investor sentiments on art returns has significant implications for individual investors and portfolio managers to make optimal decisions. In this study, we perceive art as an alternative asset, and examine the impact of investor sentiments on art returns.

In existing studies, the risk-hedging effect of art investment has been tested using auction data. However, because transactions in art auctions occur less frequently than in the stock market, calculating art returns requires a large sample size or a long sample period. For instance, Mei and Moses (2002) examined data from over 80,000 repeat auction sales, demonstrating that art exhibits lower volatility and correlation with traditional financial assets. Subsequent studies, drawing on more extensive empirical evidence, have similarly identified negative correlations between fine art and other asset classes (Potocki & Rogozińska, 2015). Art returns are either calculated by constructing a characteristic-based hedonic pricing index, which takes into account factual characteristics including genre, size, artist gender, and authenticity, to name a few (i.e., Mei & Moses, 2002; Lazzaro, 2006); or by adopting the repeat sale data of the same artwork (i.e., Pesando, 1993; Chanel et al., 1996). In response, these auction-based approaches capture changes in art return on a monthly or semi-annual basis, and existing studies are only capable of revealing that the stock market precedes changes in the art market by 6 to 12 months (Penasse et al., 2014; Öztürkkal & Togan-Eğrican, 2020).

Meanwhile, art investment studies have sought nuanced art transaction data beyond auction records. In 2002, Mei and Moses stated “infrequency of trading” as a major obstacle in art market studies and attempted to overcome it by conducting repeat sales analysis of art auction transactions covering more than 50 years. While acknowledging that long-term auction data could be biased, Mei and Moses justify their adoption of auction records since artworks “have not yet been securitized” and “studying the value of art from financial sources [is] not possible.” (p. 1657). In addition, Guerzoni (1995) investigates a crucial distortion in artwork pricing caused by the reliance on auction records that conceal investors’ information. Scorcu and Zanola (2011) examine price fluctuations of 716 Picasso paintings and demand a differentiation between pure collectors (who purchase art for aesthetic pleasure) and pure speculators (who invest in art for pecuniary returns).

The emergence of art securitization provides a possibility to address the above issue. Asset securitization is a mechanism for lenders to “raise funds by selling the future receivable cashflows of their assets” (Hu, 2011, p.3). This financial mechanism has inspired asset securitization of residential and commercial mortgages, and car loans. Since the beginning of the 21st century, discussions on art securitization have begun to appear in the literature. In 2008, Mclean overviews the characteristics of asset-backed securitizations and outlines three obstacles to securitizing artworks, namely, lack of a payment stream, high transaction costs, and complicated ownership of artwork copyright. In practice, several art securitization platforms (i.e., *Masterworks*, *Otis*, *Artory*) are established to securitize artworks, with *Masterworks* being the longest-surviving one, explained below. This study employs daily art transaction data from an art securitization platform *Masterworks*.

Founded in 2017, *Masterworks* became the first art securitization platform. It securitizes artworks with a four-step procedure, including selection, acquisition, securitization, and re-sale. In the selection stage, *Masterworks*' research team analyses

transactions from auctions, dealers, and other sources to identify "blue-chip" artworks created by the "most momentum" artists (*Masterworks*, 2023). When a selected artwork becomes available in the art market, *Masterworks* purchases it with full ownership and initializes the securitization process. For each artwork, an offering circular is registered with the Securities and Exchange Commission (SEC), serving as a prospectus for the listing of the artwork as a new security. After obtaining SEC permissions, *Masterworks* securitizes the artwork into art shares at a standard price of $20 per share. Each art share represents a fractional ownership of the artwork and can be traded between investors in the secondary market. In three to five years, *Masterworks* re-sells the artwork, and art-share owners can potentially earn a premium.

Until October 2022, the platform securitized 115 artworks, most of which are impressionist, post-war, and contemporary paintings. In addition, ten securitized paintings have been resold as physical pieces, providing an annualized net return between 9.2% (*Coup de vent* by Claude Monet, 631 days held) and 39.3% (*Staring into Space* by George Condo, 532 days held). After the initial success of *Masterworks*, the art market observed a spurt of growth in online art securitization platforms (i.e., *Otis* in 2017, *ArtSquare* in 2021, and *Maecenas* in 2021).

We examine *Masterworks* for two reasons. First, *Masterworks* is the longest-surviving art securitization platform that occupies 92% of the market share in the art securitization market. Second, it has a vast investor base of over 16,149 transactions of fractional artworks occurring daily on its platform, at a comparable frequency to the stock market. It provides a rich data set of transaction volume and return on art shares.

4.3 Hypotheses

4.3.1 Art as an Alternative Investment

Art is determined as a safe-haven asset that is not correlated or negatively correlated with stock in times of market stress and turmoil (Baur & Lucey, 2010). Existing studies using auction data have extensively confirmed the relationship between art and stock returns. They have also suggested that the stock market can predict changes in the art market in the opposite direction with a one-year lag (i.e., Penasse et al., 2014; Öztürkkal & Togan-Eğrican, 2020). Despite the availability of monthly art return index, these studies often use quarterly or semi-annual art returns from auction houses. This approach helps to avoid potential autocorrelation issues associated with constructing monthly index, and mitigates the impact of missing data (Hiraki et al., 2009).

The literature has outlined the possibility of a same-day association between stock and art markets, especially evident in online art trading. On one hand, same-day associations have been identified between stock and other assets traded daily, such as bonds (McMillan, 2020), gold (Baur & Lucey, 2010), and other metals (Jaconsen et al., 2019). On the other hand, changes in the traditional market may serve as the prime determinant of fluctuations in the fundamental value of artworks in the short run, especially during financial crises and bubble periods (Goetzmann et al., 2011; Öztürkkal & Togan-Eğrican, 2020). Conceptually extending to the COVID-19 pandemic with its stock volatilities, we capture daily changes in the art market through the analysis of art share transactions occurring daily on *Masterworks*. We examine whether art can be considered a viable alternative investment to stocks by examining the relationship between art and stock return on the same day.

H1: Stock return has a negative or no association with return in the art securitization market.

4.3.2 Investor Sentiment in the Art Market

Investor sentiment is defined as investors' belief about "future investment risk and cashflows that are not justified by the facts at hand" (Baker & Wurgler, 2007, p.129). In the stock market, investors make heterogeneous decisions that induce drastic fluctuations in the financial market (Baker & Wurgler, 2006; Ding et al., 2019). In general, happiness and optimism stimulate investors' willingness to take risks, while fear and panic constrain their desire to trade stocks (Malkiel, 2005; Kaplanski & Levy, 2010; Gerlach, 2011). However, to the best of our knowledge, only two studies in the art market have taken investor sentiment into consideration, as outlined below.

In 2013, Renneboog and Spaenjers took investor sentiment into account and claimed that art investors' confidence leads to higher art returns. In this study, they measure "consumer confidence" by employing high-income individuals' survey responses of "a good time to purchase major house income" (p. 50). The authors then construct an index of art market sentiment with three proxies, respectively: the year-on-year change in the sales volume of Sotheby's and Christie's; the rate of items sold; and the text coverage on the art market, art prices or art auctions present in historical archives. In particular, the approach used by Renneboog and Spaenjers (2013) to measure the second proxy, the rate of items sold, introduces a 'liquidity-as-sentiment' approach for measuring investors' confidence in the art market. The method posits that in markets with short-sale constraints, such as art, liquidity can serve as a proxy for sentiment (Baker & Stein, 2004). Yet, the constraint of short sale is relaxed in art securitization. In addition to being less liquid than the stock market, each artwork is unique and heterogeneous, making it even more difficult to find equivalent assets to borrow and short sale. Using auction data, investors' confidence is measured by dividing the number of sold paintings by the number of the total offered paintings in each auction (Renneboog & Spaenjers, 2013). A later study by Penasse, Renneboog and Spaenjers (2014,

p. 433) also adopt investors' confidence as a sentiment measure. They extract the art community's confidence by surveying "How do you feel about the artist's market in the next 6 months?" and test it as an independent variable to explain art prices. Consistent with the former study, their findings reiterate that the sentiment variable is associated with an increase in art returns. In this study, we use art investors' confidence as a sentiment measure, and examine its effect on art returns. We employ the 'liquidity-as-sentiment' approach to capture investor sentiment on *Masterworks*, measuring investors' confidence by aggregating the volume of art shares transacted on each day.

H2: Transaction volume of art shares has a positive association with return in the art securitization market.

4.3.3 Pandemic Sentiment and its Measures

Since 11 March 2020, when the World Health Organization declared COVID-19 a global pandemic (WHO, 2020), studies on the impact of pandemic sentiment have gained significant momentum. Defined as the "global spread of a new disease afflicting a great many people" (WHO, 2020, p. 2), pandemics generate fear and panic in the population, and induce subsequent decreases in stock return and turnover (i.e., Liu et al., 2020; Naseem et al., 2021). Taking the COVID-19 sentiment, for instance, it has a stronger predictive power on stock recession than previous pandemics (SARS, H5N1, H7N9, etc., in Nguyen et al., 2021), and has immediate effects on stock returns on the same day (Valle-Cruz et al., 2022). Thus, the question is no longer whether COVID-19 captures investor sentiment, but rather, how to effectively capture and quantify the COVID-19 sentiment.

In this respect, two measures have been employed to capture the COVID-19 sentiment. One common measure is media reports on the pandemic. In the early stages of the COVID-19 outbreak, studies construct COVID-19 sentiment indexes based on official news, public blogs, and social media posts (i.e., Donadelli et al., 2017; Duan et al., 2021). For

instance, during the initial stage of the COVID-19 outbreak in China, Li et al. (2020) examine people's psychological consequences by calculating word frequency and scoring emotional indicators from vast blog content in China, discovering people's decreased life satisfaction and anxiety. As COVID-19 spread across the globe, Twitter blogs has become a prevailing data source of sentiment measure. Ngo and Nguyen (2022) adopt a text-mining approach in analyzing Twitter posts and found the "dramatic variance" in stock markets attributed to investors' fear and hope of COVID-19. Valle-Cruz et al. (2022) analyze tweets from financial Twitter accounts to measure changes in COVID-19 sentiment.

Nevertheless, the mass media context has been subject to intense debate, and criticized for spreading fake news, over-emphasizing pandemic outbreaks, and intensifying investor panic, which exaggerates investor sentiment from the actual level (Vasterman et al., 2005; Abd-Alrazaq et al., 2020). Indeed, when constructing sentiment indexes, several researchers have attempted to overcome media exaggeration by either employing fake news as an indicator in the sentiment index (Huynh, 2021), or quantifying COVID-19 sentiment with numerical statistics, elaborated below.

Online statistics, such as daily growth of COVID-19, daily death of COVID-19, and Google Search Volume, are employed as the other sentiment measure that quantifies investors' COVID-19 panic. Lyocsa et al. (2020) adopt Google Search Volume as a gauge of investors' fear by calculating search terms that are relevant to the COVID-19 outbreak. Liu et al. (2020) employ daily COVID-19 confirmed cases to capture investors' panic about pandemic uncertainty, identifying it as the most effective pandemic measure among all others (including daily death, infectious rate, etc.). Naseem et al. (2021) provide a possible interpretation for this effectiveness. They find that due to people's psychological response to COVID-19, they are more concerned about their health and livelihood during a pandemic

outbreak. In this study, we adopt the daily number of new infections to measure the COVID-19 sentiment, proposing the following hypothesis:

H3: New COVID-19 infections have a significant association with return in the art securitization market.

4.4 Methods

4.4.1 Data

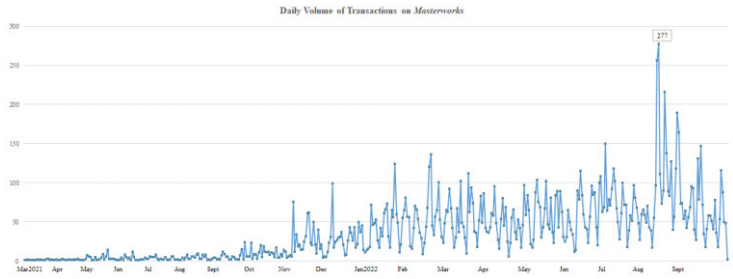
We construct a new data set of art share transactions on *Masterworks* to capture return and transaction volume in the art market. The data set records artwork, date, the quantity of shares, and price per share of each transaction. Our sample period starts on 14 March 2021, coinciding with the first recorded art shares transaction on *Masterworks'* secondary market, involving the trading of 28 shares of Günther Förg's painting at $22.4 per share. The sample period ends on 1 October 2022, when *Masterworks* suspends the public disclosure of art share transactions. Figure 1 illustrates daily transaction volumes on *Masterworks*. During the sample period, the highest volume of 277 transactions was recorded on 19 August 2022. In the end, we extract 451 days on which at least one transaction occurred on *Masterworks* and documented 16,149 art share transactions of 115 artworks. On other calendar days, no transaction occurred on any artwork through the platform. All transactions were manually recorded on a daily basis.

4.4.2 Dependent Variable

Art share return (R) is the dependent variable. Figure 4.1 reports a gradual increase in daily art share transactions. The rise can be attributed to the progressive securitization of artworks on *Masterworks*, thereby making them available to investors. Furthermore, the shift of

investors who previously acquired artworks through traditional bricks-and-mortar auction houses and galleries to online platforms due to pandemic-related lock this trend.

Figure 4.1 Daily Volume of Transactions on *Masterworks*



Notes. Figure 1. displays daily volume of transactions on *Masterworks* between 14 Mar 2021 to 1st Oct 2022. (https://www.masterworks.com/).

To address the issue of uneven distribution, we computed the weighted-average price of all artworks (P) for each day to determine the daily return of art share investment. We adjust artwork prices based on the US CPI in March 2021. The art share price on the day *t* is then

$$P_t = \frac{\Sigma_n^{i=1} s_{i,t}\, p_{i,t}}{\Sigma_n^{i=1} s_{i,t}} \qquad (1)$$

where *n* is the artwork, *t* the date, *s* the quantity of shares, and *p* the price per share. This gives the daily return of art share investment *R* on the day *t*:

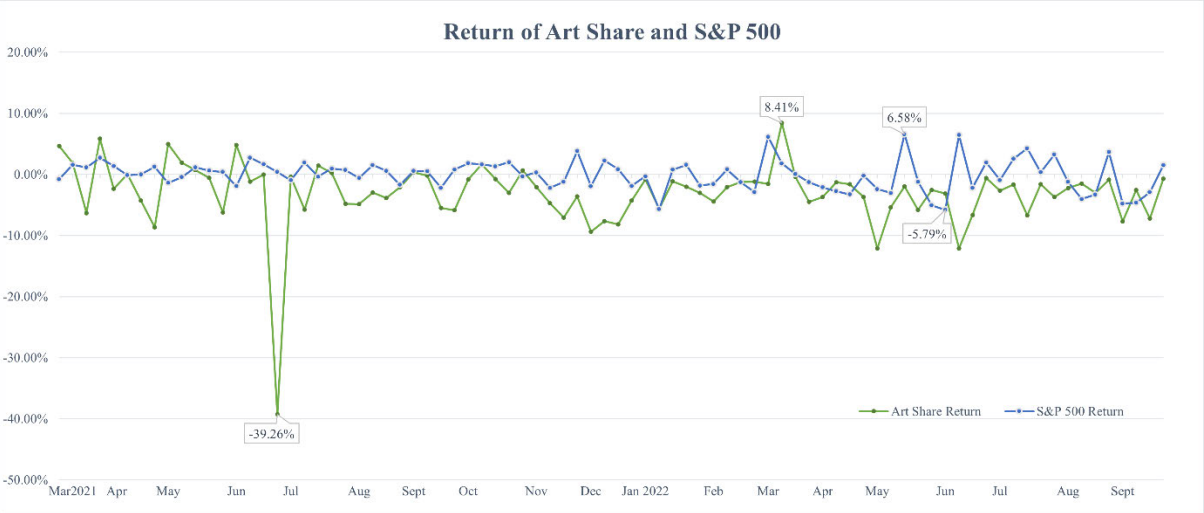
$$R_t = \frac{P_t}{P_{t-1}} \qquad (2)$$

4.4.3 Independent Variables

Stock return (SP) is adopted as an independent variable. In doing so, we examine the association between same day returns in stock and art securitization markets. We collect returns of the S&P 500, which tracks the stock performance of 500 companies listed on stock exchanges in the US, where *Masterworks* was founded and mainly operates. Returns in each

trading day during the sample period are documented. Figure 4.2 shows the returns of art shares and the S&P 500, where the art-share return visibly underperforms the S&P 500.

Figure 4.2 Art Share Return vs Stock Return



Notes. Figure 2. displays weekly real returns in art share and stock markets from 14 Mar 2021 to 1st Oct 2022. The real returns on art share are based on our record of art share transaction published on Masterworks (https://www.masterworks.com/). The weekly returns of S&P 500 are acquired from Google Finance (https://www.google.com/finance/markets/indexes).

Transaction volume of art shares (T) is employed as an independent variable that captures investors' confidence in the future return in the art securitization market. To account for investors' confidence in the art securitization market, we adopt the "liquidly as sentiment" approach, calculating the volume of art shares per artwork transacted on day *t*. *N* represents the total amount of securitized artworks trading on day *t*. These data are manually tracked using transactions published on the portfolio page of *Masterworks*.

$$T_t = \frac{\Sigma_n^{i=1} s_{i,t}}{N_t} \qquad (3)$$

The number of *COVID-19 infections (C)* is employed as another independent variable that captures investors' COVID-19 panic. Though the pandemic sentiment has been measured differently, daily growth in infection has been demonstrated as a more pronounced measure of public panic than news coverage of COVID-19 (Haroon & Rizvi, 2020) and COVID-19-related deaths (Liu et al., 2020). We track the growth of COVID-19 cases in the US for two

reasons. First, *Masterworks* requests investors to trade art shares using a US bank account. Second, *Masterworks* has exclusively released advertisements, such as on Instagram, to account of US-based residents. Consequently, the majority of *Masterworks*' investor base consists of US residents. Unfortunately, due to the fact that the earliest art share transaction occurred after the onset of the COVID-19 outbreak, the study is unable to compare investor sentiment between the pre-pandemic and during COVID-19 pandemic periods. Instead, our focus is on examining whether investors' COVID-19 panic is associated with a significant and positive art return during the pandemic. Table 4.1 presents the descriptive statistics of the above-presented variables.

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
Art Share Return	451	0.542	0.001	0	0.092
Stock Return	451	-0.0002	0.010	-0.043	0.039
Transaction Volume of Art Share	451	36.277	38.943	1	277
COVID-19 Infections	451	135,564.820	178,253.165	4,256	1,355,357

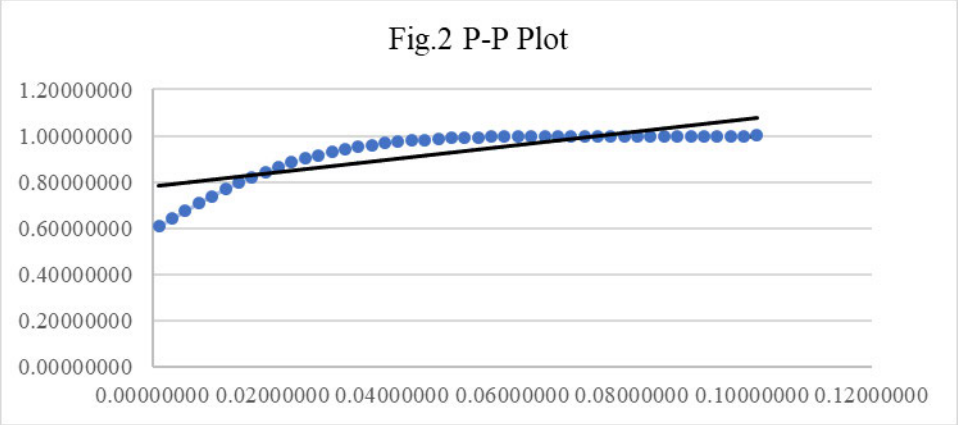
Notes. The period of these descriptive statistics is from 451 days between 14th Mar 2021 to 1st Oct 2022 on which art share transactions occurred. The daily art share return is calculated based on art share transactions published on Masterworks (https://www.masterworks.com/). The daily stock return is acquired from Google Finance (https://www.google.com /finance/markets/indexes). Daily transaction volume of art share is calculated by transactions published on the portfolio page of Masterworks (https://www.masterworks.com/dashboard/portfolio). COVID-19 infections in the US are recorded from *The New York Times* (nytimes.com).

4.4.4 Model

We use the ordinary least squares (OLS) regression to examine whether stock returns and investor sentiments are associated with art share returns. The OLS regression is conducted in three stages. First, we test for normality and multicollinearity to determine whether the dataset can be examined by OLS. To do so, we construct a P-P plot (Figure 4.3) to examine data distribution and calculate the variance inflation factor (VIF) between independent variables. Despite few studies have identified COVID-19's same-day impact on stock returns

(Dash & Maitra, 2022), we exclude any possible multicollinearity with VIFs lower than 5, the threshold value that signals multicollinearity (O'Brien, 2007; Salmerón et al., 2018). All measures have been standardized to have zero mean.

Figure 4.3 P-P Plot of Art Share Returns



In the second stage, we regress art returns *R* on stock returns *SP* and investor sentiments *T* and *C* with the following OLS model (4). Since measures of financial and economic data, such as investor sentiments, are often positively skewed (Robert & Casella, 2004; Amaya et al., 2015), logarithm is applied on investor sentiment measures to reduce skewness.

$$R_t = \alpha + \alpha_1 SP_t + \alpha_2 lnT_t + \alpha_3 lnC_t + \mu_t \quad (4)$$

We use same-day data as the simultaneous effect of investor sentiment found in the stock market (Dash & Maitra, 2022); investors can respond to public health crises simultaneously (Abd-Alrazaq et al., 2020). The result is shown in Table 2 below.

4.5 Results

The results in Table 4.2, column (1) reports a positive association between returns in art securitization and stock markets significant at 0.1 level. Adding investor sentiment measures in columns (2) and (3), associations between art share and stock returns become insignificant.

Table 4.2 Multivariate Test

Dependent Variable: Art Share Return	(1)	(2)	(3)
Stock Return	0.139*	0.063	0.064
Sentiment Measures			
Transaction Volume of Art Share		0.002***	0.002***
COVID-19 Infections			0.005*
N	451	451	451
R^2	0.012	0.470	0.472

Notes. This table presents the results of a liner regression on art share returns on three independent variables over the observation period from 14th Mar 2021 to 1st Oct 2022. Column (1) only includes stock return as the independent variable. Column (2) adds transaction volume of art share as an independent variable that measures investors' confidence in future returns in the art securitization market. Column (3) added COVID-19 inductions as an additional independent variable that measures investors' COVID-19 panic. *, **, and *** indicate significance at 0.10, 0.05, and 0.01 levels respectively.

Thus, we accept H1, as our model only indicates a low association between returns in art securitization and stock markets on the same day, which loses significance after considering investor sentiment variables, and after 5 and 10 days. In line with expectations, our result evident art share as a "safe haven" asset that has very weak associations with stock performance.

We find significant associations between investor sentiments and art returns. According to column (2) in Table 4.2, the positive association between transaction volume and return in the art securitization market is significant at 0.01 level. While the coefficient 0.002 appears small, it confirms the rationale of taking investors' confidence into account in decision making. We thus accept H2, arguing that art investors' confidence in the art securitization market is associated with higher art share returns. This finding is consistent

with the previous study that investigates investors' confidence in the art auction market (Renneboog & Spaenjers, 2013).

In addition, our model presents a co-movement between COVID-19 infections and art share returns at a significance level of 0.1. Despite pandemic sentiment's lower significance level, we accept H3. The positive, while modest coefficient 0.005 indicates a positive association between art share return and COVID-19 infections. In other words, while the COVID-19 outbreak is negatively affecting stock market returns, it promotes return in the alternative art securitization market. In line with the role of art investment in hedging against market volatility during financial crises and economic recessions mentioned above, our findings suggest the potential of investing in art shares as an alternative to acquiring art through auction houses and galleries for investment purposes.

Studies in the stock market have also pointed out possible opposite effects between investor sentiment's immediate and long-term effect (Hengelbrock et al., 2013). Meanwhile, financial markets often exhibit delayed reaction to new information and sentiments. In response, investors may take several days to fully digest and response to information, leading to lagged effect on sentiment measures (Kostopoulos et al., 2020). Therefore, to account for these issues and to provide robustness checks, we lag stock return and sentiment measures for 5 and 10 trading days. The lagging is adopted for two reasons. First, we take into account the 7-day (5+2) recurring cycle of investor sentiment, which suggests analyzing sentiment on the same weekday to overcome the day-of-the-week effect (i.e., Liu et al., 2022). Second, lagging of 5 and 10 trading days is particularly applicable when the investor sentiment is measured by consumption of arts (i.e., music consumption), as the predicting power of such sentiments has been proven significant on same-week and next-week stock returns (Edmans et al., 2022). The result is presented in Table 4.3. The lagged stock return variable for five days is positive

at the 0.10 level, while the lagged stock variable for ten days is still positive but loses significance at the 0.10 level.

Table 4.3 Robustness Check

Dependent Variable: Art Share Return	(1)	(2)	(3)	(4)	(5)	(6)
5-day lagging						
Stock Return (t-5)	0.121*	0.064	0.043			
Sentiment Measures						
Transaction Volume of Art Share (t-5)		0.002***	0.002***			
COVID-19 Infections (t-5)			0.005*			
10-day lagging						
S&P 500 Return (t-10)				0.107	0.030	0.031
Sentiment Measures						
Transaction Volume of Art Share (t-10)					0.002**	0.002***
COVID-19 Infections (t-10)						0.003*
N	446	446	446	441	441	441
R^2	0.009	0.470	0.478	0.007	0.488	0.490

Notes. This table presents the results of a liner regression on art share returns on three independent variables over the observation period from 14th Mar 2021 to 1st Oct 2022. Column (1) and (4) include lagged stock return of 5 days and 10 days as the independent variable respectively. Column (2) and (5) add lagged transaction volume of art share for 5 days and 10 days as independent variables of art share return respectively. Likewise, column (3) and (6) added lagged COVID-19 inductions for 5 and 10 days respectively as independent variables. *, **, and *** indicate significance at 0.10, 0.05, and 0.01 levels.

4.6. Conclusion

In the last decade, the digital transformation of the art market has enabled online transactions of art (i.e., online auction, NFT transaction, online art securitization) (Rentschler & Lee, 2021). In this study, we construct OLS regression on art returns of an online art securitization platform and find that art investors' confidence is positively related to art share returns in the short run, and investors' COVID-19 panic is positively associated with the alternative art market.

The study advances the literature in two ways. First, we construct a novel data set that enables the measurement of daily art returns. It overcomes several disadvantages of using auction records, including infrequent repeat sales (Mei & Moses, 2002), skewed toward high-net-worth individuals (Scorcu & Zanola, 2011), and long sample periods over which macroeconomic factors might affect art prices more than art related factors (Öztürkkal & Togan-Eğrican, 2020). Second, we identify the same-day association between investor sentiments and art returns. It advances the six-month period identified in existing art market studies (i.e., Penasse et al., 2014), providing portfolio management studies with a new perspective on asset allocation and risk evaluation.

Practically, our model presents no statistically significant relationship between stock and art returns. This finding supports the "safe-haven" hypothesis which assumes negative or insignificant associations between art and stock returns, and thus supporting art as a risk-hedging asset in an investment portfolio for investors (i.e., in Kraeussl & Logher, 2010; Higgs, 2012; Öztürkkal & Togan-Eğrican, 2020). Rather, we document higher art share returns when investors are more confident with future returns in the art securitization market and are more pessimistic toward the COVID-19 pandemic. For investors, our study outlines the importance of taking investor sentiment into account and considering the timing of art share investment and transaction. For policy makers, alongside the development of the financial aspect of artworks, in the manner of the stock market, it is also part of the financing of the market and requires rules to be put in place to avoid irrational and illegal behaviors.

There are two limitations to this study. First, art transactions on *Masterworks* exclusively occur online, and the observed increase in transaction volume throughout the sample period might be attributed to the closure of physical bricks-and-mortar auction houses, art galleries, or art fairs. While auction houses like Sotheby's and Christie's are embracing digital transformations and operating online auctions, future studies could

encompass longer sample periods to capture online auction transactions. Second, the increase in art transaction volume at *Masterwork's* emergence could be attribute to the novelty effect, where the innovativeness of art securitization attracts investors. Therefore, when more sufficient data is available, examining art returns and its predicators over longer sample periods, or across different platforms, would be a worthwhile area of future research.

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Chapter 5 Conclusion

5.1 Introduction

This study examined how auction houses and online art securitization platforms achieve legitimacy with art investors in the digital era. In order to do so, it operationalized the over-arching research question, answering it in three separate papers presented as chapters in this thesis. This final chapter presents a short background section on the thesis overall, providing a high-level review of legitimacy theory that links all three papers in this thesis theoretically. It also provides an overview of role of auction houses in the art market as it digitizes to transform operations in a period of disruption and uncertainty. Art market studies in the digital era are in their infancy. There is little material to draw on directly, resulting in this study examining a confluence of literatures across a number of fields (for e.g., the art market; legitimacy theory; and portfolio management), which are highlighted in this chapter.

This chapter demonstrates that, unlike auction houses and art galleries, which have gained their legitimacy as market intermediaries in numerous studies (Mei & Moses 2005, Robertson 2005, Campbell 2008, Renneboog & Spaenjers 2013), the performance of online art securitization platforms remains to be explored. Research into art securitization platforms is emergent. This study provides a first foray into art securitization platforms as the market emerges as a disrupter in the field. However, there has long been a concern in the art market that the conventional and regular means of artwork distribution can "constrain what can be done", while innovative distribution channels, such as online art securitization platforms, can "open up otherwise unavailable possibilities" (Becker 1982, p.6). This concern saw a call for a comprehensive and systematic study on online art securitization platforms and their relationship to auction houses in the art market. Art securitization platforms as new entrants have been overlooked, but were examined in this study.

Hence, this study has contributed to the literature by expanding the scope of art market research. It has done so by investigating both auction houses and online art securitization platforms in the digital era. Second, this study contributed to the emergent literature on legitimacy in the art market by adopting legitimacy theory. Third, this study has created two frameworks that position the study in the literature, providing future researchers with a basis to build on the foundation of this study. The two frameworks are presented later in this chapter.

The rest of the conclusion is structured as follows: First, key contributions to new knowledge of the thesis are summarized. This is important as there has been little published on the art market in the digital era, making this thesis unique and innovative. Second, one of the key contributions of the study to new knowledge is its theoretical contribution. This includes the proposed two frameworks presented below. The author is unaware of any other study of the art market that provides such frameworks, making this contribution a first in the field. Third, practical implications are discussed to provide art organizations information of when, how, and which legitimacy management approach to apply. Fourth, limitations of the study are discussed, with future research directions outlined, followed by the concluding remarks.

5.2 Background

Grounded on Suchman's definition, more recent studies see legitimacy as a "perception of evaluation and social judgments" (Zelditch, 2001; Tyler, 2006). For instance, one renowned management researcher, David Deephouse, argues that a legitimate organization is one "whose actions are congruent with social actors' expectations for action" (1996, p.1025). Conceptualized in the art market, this study investigated legitimacy management in arts organizations. Since legitimacy management is based on the communication between the

organization and its investors (Elsbach, 1994), it involves an ongoing process of judgment formation (Haack & Sieweke, 2018), requiring constant attention to remove barriers (Reay et al., 2006).

To investigate legitimacy management in the art market, this study adopted cases of arts organizations at different stages of development, including the established organization Sotheby's and the new venture Masterworks, among others, to analyze how arts organizations achieved and maintained legitimacy with investors. Since Sotheby's first online art auction in 1999, the literature has paid attention to the phenomenon of the internet as a powerful and disruptive innovatory tool (Sidorova, 2019). In the art market, the emergence of novel technologies, including the internet, have inspired strategic transformations in established auction houses, and facilitated technology-driven art investment intermediaries, such as art securitization platforms and online marketplaces. The emergence of technology-driven art ventures offers investors more affordable, accessible, and transparent art investment options, requiring established organizations to maintain legitimacy to remain competitive in the art market. However, for new ventures entering a long-established art market, legitimacy is not inherited and must be earned. To persuade investors of the appropriateness and desirability of their application of technologies, new ventures have to achieve legitimacy by overcoming the "liability of newness" (Singh et al., 1986), accessing resources and increasing their otherwise limited chances for survival (March, 2013).

5.3 Empirical Contribution

The thesis provides answers to three closely related enduring conundrums in the art market. First, how do established art intermediaries sustain legitimacy. Disruptive technologies induce changes in the art market, how existing organizations maintain legitimacy with investors. In particular, investor expectations of an appropriate organization

are constantly changing in the digital era. Art investors seek established organizations to not only operate legally and ethically, but also be able to survive and remain competitive in times of crisis (i.e., financial recessions, global pandemic) and when challenged by new ventures (i.e., novel technology-driven ventures, innovative business models).

To answer the research question, chapter two of the thesis investigated legitimacy maintenance of Sotheby's over two decades. Findings suggest existing organizations apply a tailored approach in addressing each type of legitimacy challenge. While investors trust and assume an existing organization to be legal and regulatory, unable to satisfy this assumption leads to severe questioning from investors and the government. To regain trust, existing organizations out to persuade investors that illegal and unethical practices are not in their best interests. Therefore, efforts are paid to decouple illegitimate individual or organization practices from the rest, and convey to investors the legitimacy of the organization's remaining practices. Compared to regulatory challenges, an organization's pragmatic challenge induced by external environment factors, such as dropping sales and revenues in the post-pandemic era, could be solved by normalizing marketing practices, namely broadening the investor base and fostering investor relationships. Art investors, thus, view the organization that provides a more accessible, reliable, and transparent service than before, as legitimate. Meanwhile, compared with new competitors, established organizations have inherent advantages in maintaining cognitive acknowledgement from investors. When historical records of operation are available for scrutiny, organizational legitimacy increases. The existing organization's financial status, access to premium resources, and organizational identity leave a positive perception among investors. Making historical records available to investors increases the likelihood of the survival of the organization.

Second, how can new intermediaries gain legitimacy? In particular, when existing organizations pander to norms in the art market, investors are more certain whether and how

a new venture's distinctiveness plays a role in new ventures' legitimacy management. As legitimacy is in the eyes of the art investor (Zimmerman & Zeitz, 2002), the study constructed a data base with 2,510 eWOM from four art securitization platforms to decode investors' perceptions on each platform's legitimacy-achieving approach. These approaches were classified into two categories, conformance and distinctiveness. Conformance approaches included articulating partnerships, being a member, conforming to stakeholder expectations, and leveraging knowledge spillover. Distinctiveness approaches included technology and innovation, and forming an entrepreneurial identity. Findings reveal both distinctiveness approaches as significant predictors of new ventures' legitimacy, and suggest that even without conformance efforts, new ventures can offer novel products and services that shock, violate, and contradict existing norms (Taeuscher et al., 2021). Art investors, particularly novelty-seekers are convinced by applications of novel technologies, and an entrepreneur's capability to understand not only technological know-how, but also patterns and trends in the art market. This data base provides a foundation for future researchers as it is novel but useful theoretically and practically, thus creating new knowledge for researchers and practitioners.

Third, is new intermediaries viewed as legitimate? Whether new ventures meet investor expectations for art investment, including hedging profile risk and generating profit in an investment profile, has been overlooked in art market studies. When defining artworks as an alternative asset, researchers conclude that intermediaries are a significant predicator of artwork prices (i.e., Guerzoni, 1995; Mei & Moses, 2002). In other words, compared with artworks transacted via other channels, artworks sold by Sotheby's and Christie's have higher appreciation, and are more effective in hedging risks on the stock market. For new ventures, however, despite providing affordable and transparent investment options to investors, their

effectiveness in hedging profile risks in times of crisis have been overlooked. Thus, in this way, this study has created new knowledge in this emerging field.

To fill this gap in research, chapter four of the thesis conducted a case study on Masterworks and adopted MPT to examine art investment returns and transactions in this novel art securitization platform, and how investor sentiment affects art returns. It contributes to new knowledge by contrasting the art securitization market with traditional auction-based art investments, which have longer trading cycles and biases toward high-net-worth individuals. The study introduced a novel database of 16,149 daily art share transactions on Masterworks, and measured investor confidence through transaction volume and COVID-19 sentiment via daily infection counts. Using ordinary least squares regression, the results support the hypothesis that art is weakly correlated with stock market returns, reinforcing its role as an alternative asset class. While stock returns and art share returns exhibit a minimal same-day association, this relationship diminishes when investor sentiment variables are included. This supports "safe-haven" theory (Öztürkkal & Togan-Eğrican, 2020), suggesting that art investments can mitigate portfolio risks during economic uncertainty. Hence, this case study takes research on the emerging art securitization platforms forward in ways previously unknown in this emergent field.

5.3.2 Theoretical Contribution

To summarize, the key theoretical contributions of this thesis that created new knowledge entailed investigating key legitimacy challenges in the art market in the digital era, focusing on how established organizations and new ventures navigate investor expectations. In the next section, theoretical frameworks are proposed.

5.4 Theoretical Contribution

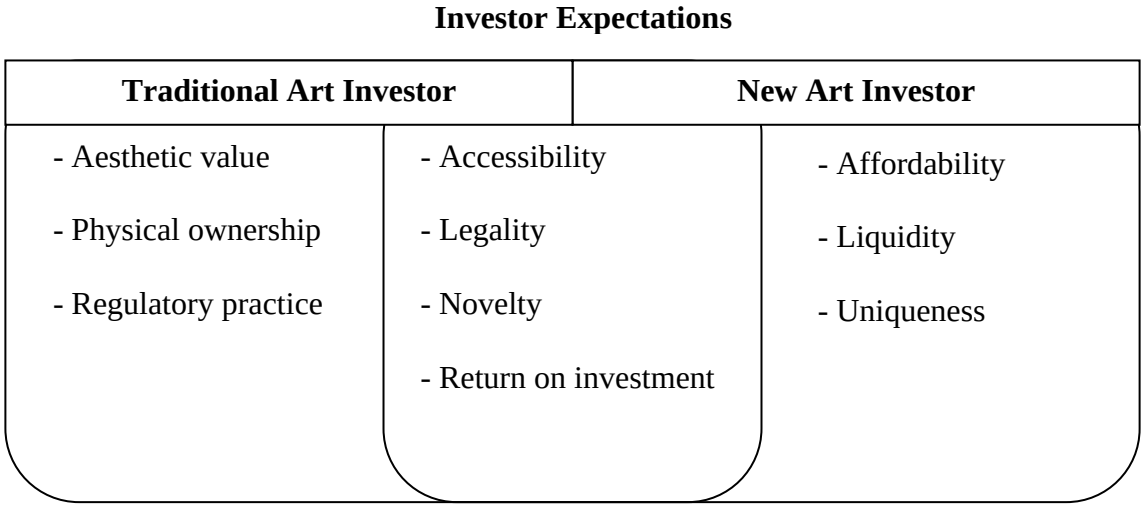
In Suchman's pioneering study, legitimacy was defined as "desirable, proper, or appropriate within some socially constructed norms, values, belies, and definitions" (1995, p.584). This definition induced further discussions on the subject of judging legitimacy, and the scope of the "socially constructed" context. Later studies have identified "audiences" (called "investors" in this study) as the subject group for judging legitimacy. These studies limit the range of investors from those "external audiences" who obtain public acceptance (i.e., Kuilman & Li, 2009; Jeong & Kim, 2019), to "particular audiences" that are relevant to the organization rather than universal investors as a whole (Hudson et al., 2015). They are then narrowed to "resource-holding audiences" of an organization (Uberbacher, 2014). In the digital era, the emergence of digital technologies expands the scope of art investors from traditional high-net-worth investors with aesthetic standards, social status, and highly educated backgrounds, to new art investors seeking affordable art investment opportunities with different personal and professional profiles. To understand legitimacy management in an organization, it is crucial to understand the context that the organization operates in, and the external investor group that holds resources in the context. The following sections provide a framework on the transformational composition of art investors and their expectations. In response to art investors' shifting and evolving expectations, the study investigates the nexus of norm conformance and distinctiveness, and how these two paradoxical means of legitimacy management interconnect in the field of the art market.

5.4.1 Investors' Transformational Expectations

Legitimacy judgment from art investors is changing rapidly, in part because digital transformation in the art market creates novel experiences for art investors and induces emotional changes in them (Elfenbein, 2007). Emotional changes are fast and abrupt. In response, changes in legitimacy judgments are triggered, influencing information that other

investors notice (Huy et al., 2014). In this study, art investors' expectations and their transformation are revealed by newspaper and social media content. Figure 5.1 provides the first of two frameworks developed from this study. Figure 5.1 summarizes art investors' expectations in the digital era. As the figure illustrates, the middle section illustrates the joint expectations from both traditional and new investors in the digital era. On the left-hand side are the expectations of traditional art investors, while on the right-hand side are those of new art investors. Traditional art investors seek aesthetic value, physical ownership, and regulatory practice which are not aligned to new investors' expectations. New investors, however, are persuaded by the affordability and liquidity of art investment, and the uniqueness of the art product, which can be considered unreliable by traditional investors.

Figure 5.1. Transformation of Investor Expectations



The framework provides two insights, based on empirical study. First, it suggests the transformation of art investors in the digital era. Traditionally, art investors purchase physical artworks, which are normally non-duplicable, authentic art pieces. Beyond a possible return on investment, these investors appreciate the aesthetic value of the artwork, by hanging it in the living room, for example. In the digital era, disruptive technologies have induced new approaches to creating and purchasing art (i.e., NFT arts, digital arts, art securitization),

providing investors with more affordable and liquid channels for art investment. The scope for art investors, thus, is expanding to those who invest in art because of a lower financial threshold and improved possibility to re-sell it in the art market.

The second claim is about similarities in expectations of a broader investor base. In essence, individuals who purchase art partially view it as an investment. Just like investors of any other asset, both traditional and new art investors seek opportunities to access legal and transparent art investments, and expect a positive return on that investment. Notably, novelty is not only expected by new investors who exhibit interest and understanding in disruptive technologies, but also by traditional art investors. Regardless of the extent to which traditional investors believe in novel technologies, they expect organizations to navigate market trends, understand know-how, and make changes to create a forward-thinking identity.

For the first time in the literature, this study reveals investors' expectations about the art market beyond return on investment. Findings support Haack's (2018) proposition of legitimacy as an ongoing process of judgment formation. In the art market, legitimacy judgments can change over time, and this study outlines two reasons for the changing judgments of art investors. First, the change is induced by a transformation in the composition of art investors. In addition to traditional investors who purchase artworks primarily for their aesthetic value and financial return, a new cohort of tech-savvy investors has emerged. Investors select art intermediaries for their novelty and technology application. Second, traditional art investors' perceptions of technology have evolved from scepticism and distrust to cautious acceptance. This evolution means that technology is no longer perceived as a threat to established norms, but rather as a tool for conveying transparency. In response to legitimacy challenges, such as price-fixing scandals involving established organizations, and the broader digital transformation of the art market, traditional

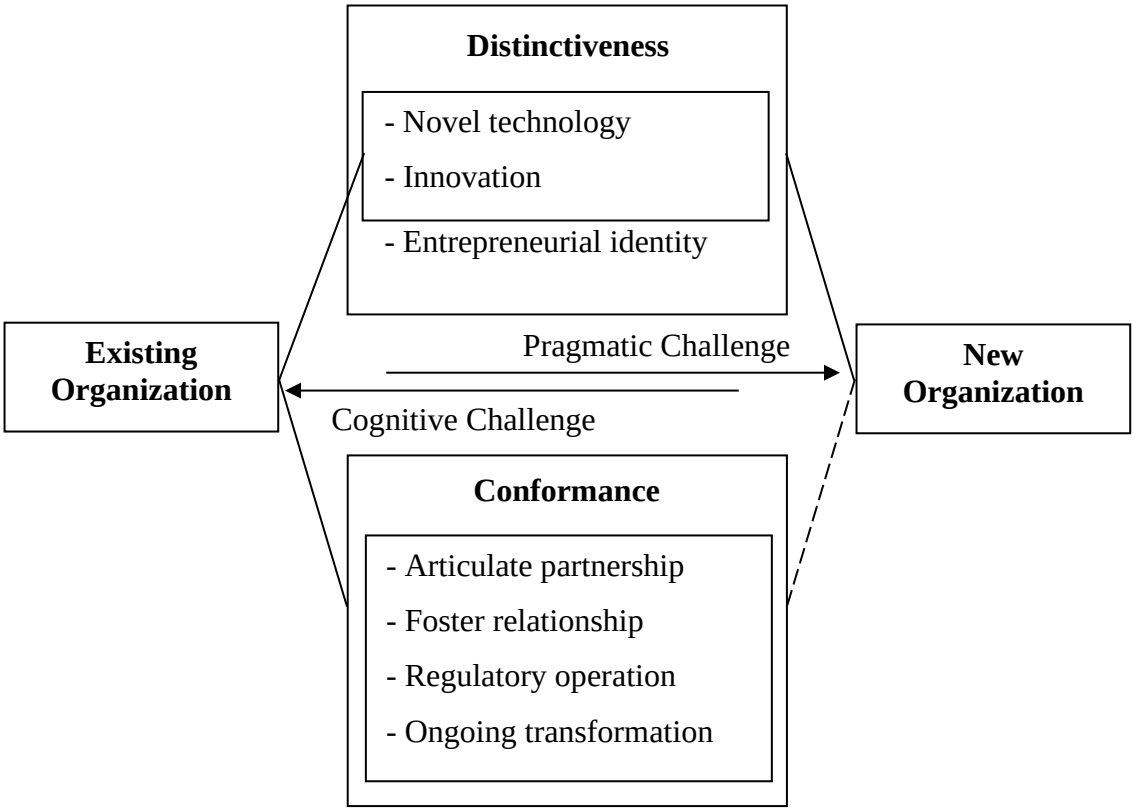
investors have become increasingly aware of the importance of adopting technological innovations to maintain transparency and credibility. Therefore, the study highlights the importance of revealing how organizations at different stages in the lifecycle, including established organizations with historically proven business models, experiment and initiate transformations in the digital era to meet evolving investor expectations.

5.4.2 Norm Conformance verse Distinctiveness

To understand how organizations at different stages manage legitimacy, this study examined Sotheby's as a case to uncover effective approaches of maintaining legitimacy, and art securitization platforms as instrumental cases to examine how new organizations achieve legitimacy in the art market. Figure 5.2 summarizes effective legitimacy management approaches in two main categories, conformance and distinctiveness. The figure provides a framework illustrating the need for distinctiveness and conformance in order to achieve legitimacy for organizations in the art market.

Two squares in the middle introduce two legitimacy management approaches, distinctiveness and conformance. Distinctiveness approaches include applying novel technology, innovation, and forming entrepreneurial identity. Conformance approaches include articulating partnerships, foster relationships, regulatory operations, and conducting ongoing transformation. To maintain legitimacy, existing organizations must apply both distinctiveness and conformance approaches (apply novel technology and innovation), however, for new organizations, conformance approaches are optional in gaining legitimacy. The two arrows in the middle show how existing organizations and new organizations challenge each other. Existing organizations dominates market resources and induce pragmatic challenges for new ventures, while new organizations shift investor expectations, challenging how investors view existing organizations cognitively.

Figure 5.2. Legitimacy Management Approach for Existing and New Organizations



For existing organizations, both distinctive and conformance efforts are required by investors. Organizations not only need to "follow the rules" (Suchman, 1995) and meet minimal regulatory standards, but also need to demonstrate strategic isomorphism viz-a-viz other organizations in the art market (Deephouse, 1996). They do so by anticipating partnerships, fostering relationships with investors, and transforming when other organizations do so. While conformance efforts are essential, the rise of technology-driven new ventures challenge cognitive legitimacy of existing organizations. Since investors may deem novel practices, business models and operations more appropriate, existing organizations that merely conform to long-standing norms are perceived as outdated by novelty-seekers. The latter can affect their survival in a fast-moving art market. Therefore, efforts to be distinctive, namely by application of novel technologies and innovation, are compulsory for existing organizations like auction houses in the art market.

For novel organizations, however, conformance is not compulsory. While existing organizations create pragmatic challenges for new ventures, such as dominating market resources, the tension between conformance and distinctiveness could be addressed by forming a unique entrepreneurial identity, and applying novel technologies and innovations to business operations.

The framework in Figure 5.2 extends legitimacy theory in two ways. First, it challenges the perception of conformance as a desirable approach to achieving legitimacy (i.e., DiMaggio & Powell, 1983; Suchman, 1995; Henisz & Zelner, 2005). Aligning with Navis and Glynn (2011), the study identifies entrepreneurial identity as an effective legitimacy-achieving approach, especially in the eyes of uniqueness-expecting investors. This study argues that entrepreneurial identity, particularly sharing an entrepreneur's story, is an exclusive approach only effective for new ventures, extending the literature. While an existing organization decouples an individual employee's practice from organizational identity to prevent possible alignments between an individual's illegitimate actions and the organization profile (i.e., such as in Sotheby's price-fixing scandal), stories of an entrepreneur's background, capability, and practice address the tension between legitimacy and distinctiveness. For instance, when a new venture's CEO is a specialist in art history, this unique art-relevant identity assists the new venture in building trust among art investors.

Second, the study reveals that a new organization's distinctiveness is a cognitive challenge to existing organizations in the art market. This is in addition to confirming the effectiveness of distinctiveness as a legitimacy challenge approach in the art market. This is especially the case when a novel business model like art securitization is introduced by new organizations. Aligning with Taeuscher et al.'s (2021) investigation of crowdfunding platforms reveals a positive correlation between level of distinctiveness and crowdfunding. In in the art market context, distinct and unique new organizations like art securitization

platforms challenge existing norms, inducing cognitive challenges to existing organizations operating in it, such as auction houses which have operated for centuries.

In conclusion, the study enhances legitimacy theory by illustrating the dual approaches of conformance and distinctiveness. Established organizations must balance conformance with innovative transformations to address cognitive challenges from emerging ventures. In contrast, new organizations can rely on distinctiveness leveraging entrepreneurial identity and innovation to gain legitimacy without conformance. Entrepreneurial storytelling emerges as a unique strategy for new ventures, while established organizations often distance themselves from individual narratives to mitigate risk. This contribution of the study is novel, developing new knowledge and taking theory forward in a significant way.

5.5 Limitations and Future Research

The following section introduces three limitations of this study, including possible limited data availability, limited art share transaction data, and an exclusive focus on the secondary art market. Future research directions to advance this study are also discussed below.

5.5.1 Limitations

The study has three limitations that present opportunities for future research. First, data were hard to access for this study, given the newness of the field and the rapid changes occurring in the art market. Hence, the thesis has limitations in regard to data availability. To assess investors' legitimacy judgment in auction houses, this study used media reports, which do not facilitate inter-investor communication. In the digital era, investors can communicate and be affected by other judgments (i.e., via comments on social media). Such information would allow studies to investigate the interaction between individual legitimacy judgments, and how individual measures of legitimacy are associated with a group's judgment. Specifically, in

regard to Chapter 3 where a database of investor comments was manually constructed and updated on a weekly basis, it was evident that some comments, particularly negative comments, were deleted from social media sites when the social media posts were revisited. It is acknowledged that there is a room to analyze investor perceptions using a more nuanced approach to the data (i.e., likes and dislikes under social media posts, volume of reposts; posts removed or not removed from social media sites over time).

The second limitation concerns the third study in Chapter 4, which measures the impact of investor sentiment on art returns from 2017 to 2022. Since Masterworks paused publishing its transaction data after 2022, additional data over a longer time period were not available. If, however, a more extensive dataset was available with higher-frequency observations and transaction records from more samples of art securitization platforms, the study would have been able to compare the effectiveness of generating returns and enhancing liquidity to a new organization's legitimacy. Since investors update their perceptions and portfolios continuously by evaluating their own expectations and investment returns, a more extensive dataset would have allowed investigation on whether changes in individual expectations led to changes in the sensitivity to investor sentiments. Future studies in this area would be enhanced by the availability of a long-term database with higher frequencies.

Third, the study focused on organizations in the secondary art market using a case study approach. Hence, findings are not generalizable, other than to theory. This may limit the generalizability of the findings in the primary art market. Art investment occurs in the primary art market. The initial sale of artworks occurs directly from artist to their representative (i.e., gallery, art dealer); however, the first art investor is not accounted for in this study. Compared to investors in the secondary art market, these first-hand art investors are the major supporters of emerging artists, and are the original setters of an artist's value and reputation. Thus, investors in the primary art market may apply different measures to

judge an arts organization's legitimacy from the findings of this study. It is left to future studies to examine this matter.

5.5.2 Implications and Future Research

While this study acknowledges the evolving expectations of traditional and novelty-seeking investors, future research could deepen the analysis by developing a more nuanced segmentation of investor types. Current findings treat investors largely as two broad categories, conservative and novelty-seekers, without fully accounting for the heterogeneity within each group. Future studies could incorporate demographic factors (such as age, geographical background, and educational level), investment motivations (e.g., financial returns or speculative interest), and technological literacy to construct a nuanced understanding of investor behavior. By moving beyond binary investor typologies, future studies can illuminate the evolving relationship between investor heterogeneity and legitimacy management in the digital era. This nuanced understanding could inform other art market stakeholders, such as commercial galleries and artists, to brand, present, and create artworks that would appeal to their tastes and collecting interests. In other words, future studies would be undertaken at the individual level (i.e., the artist) as well as at the organizational level (i.e., the art securitization platform, or the auction house).

Future research could examine the through the lens of stigma theory to explore how arts organizations recover from specific reputational challenges, such as price-fixing scandals. While this study emphasizes legitimacy management in the context of evolving investor expectations, it does not fully address how organizations manage and rehabilitate their legitimacy after experiencing public stigma that has been exposed to not only art investors but also public audiences. Stigma theory offers a rich framework for analyzing the social processes through which organizations are discredited, labeled as deviant, and subsequently attempt to repair their standing (Goffman, 2009). In the art market, where trust,

authenticity, and prestige are critical, the impact of scandals can be profound and enduring. Investigating how established intermediaries, such as auction houses, deploy different recovery methods could uncover important mechanisms of organizational resilience.

5.6 Concluding Remarks

In order to answer the research question for this study, three individual papers were written, which formed the findings section of the thesis. Each paper has its own literature review, and theoretical framework. These three papers are book-ended by the introduction and this concluding chapter of the thesis. Together, they form a cohesive whole for the study. Since Sotheby's first online art auction in 1999, the 21st century has witnessed an increasing application of internet technology in the art market, from auction houses to art securitization platforms. However, art market researchers have not paid much attention to the phenomenon of the internet as a powerful disruptive force and source of innovation (Sidorova 2019; Liu et al, in press; Liu et al, 2025). The study advanced the understanding of legitimacy management in the art market, highlighting areas for future investigation in the art market.

The study's contributions extend beyond academia to practitioners in the art market. Established organizations can benefit from understanding the necessity of balancing traditional practices with innovative transformations to retain their competitive edge. At the same time, new ventures can leverage distinctiveness and entrepreneurial identity to achieve legitimacy, even without full conformance to traditional norms. These insights underscore the ongoing relevance of legitimacy theory in understanding organizational behavior in a dynamic, technology-driven environment.

As digital technologies continue to redefine the art market and investor profiles, further research is needed to explore the long-term implications of these transformations. Expanding datasets, incorporating primary market dynamics, and investigating inter-investor communication through digital platforms are promising avenues for extending the knowledge

generated by this study. Together, these efforts will contribute to a more comprehensive understanding of the art market's evolution and the complex interplay between legitimacy, innovation, and investor expectations.

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Appendices

Appendix 1 Statement of Authorship for Chapter 2

Statement of Authorship

This is to certify that the co-authored paper titled 'Organizational legitimacy in the digital era: The case of Sotheby's' included as Chapter 2 in Jiaxin (Suzie) Liu's thesis, and titled in the thesis 'Gaining and maintaining legitimacy in the art market' is her own work. She was the primary contributor to this paper, contributing more than 80% of the study. My contribution as Jiaxin (Suzie) Liu's principal supervisor is summarized as follows:

1. **Manuscript Review**: I provided comments on the early drafts of the paper. Including structural, grammatical, and contextual comments.
2. **Manuscript Refinement**: I provided advisory guidance on Jiaxin (Suzie) Liu's manuscript refinement and development conceptually and theoretically.

As a co-author, I, Ruth Rentschler, have reviewed and approved this statement and have provided my consent for the inclusion of the paper in Jiaxin (Suzie) Liu's PhD thesis.

Signature of Co-author: [redacted]

(Professor Ruth Rentschler)

Date: 23 January, 2025

Statement of Authorship

This is to certify that the co-authored paper titled '*Organizational legitimacy in the digital era: The case of Sotheby's*' included as Chapter 2 in Jiaxin (Suzie) Liu's thesis, titled '*Gaining and maintaining legitimacy in the art market*' is her own work. She was the primary contributor to this paper, contributing more than 80% of the study. My contribution as Jiaxin (Suzie) Liu's co-supervisor is summarized as follows:

1. **Manuscript Review**: I provide comments on the early drafts of the paper. Including structural, grammatical, and contextual comments.

2. **Manuscript Refinement**: I provide advisory guidance on Jiaxin (Suzie) Liu's manuscript refinement.

As a co-author, I, Boram Lee, have reviewed and approved this statement and have provided my consent for the inclusion of the article in Jiaxin (Suzie) Liu's PhD thesis.

Signatures of Co-author: 

Date: 23 Jan 2025

Appendix 2 Statement of Authorship for Chapter 3

Statement of Authorship

This is to certify that the co-authored paper titled '*Leveraging Entrepreneurial Identity and Technology: Legitimacy of Art Securitization Platforms*' included as Chapter 3 in Jiaxin (Suzie) Liu's thesis, titled in the thesis '*Gaining and maintaining legitimacy in the art market*' is her own work. The study was published by *Journal of Cultural Economics* in January 2025. Jiaxin Liu was the primary contributor to this paper, contributing more than 80% of the study. My contribution as Jiaxin (Suzie) Liu's principal supervisor is summarised as follows:

1. **Manuscript Review**: I provided comments on the early drafts of the paper. Including structural, grammatical, and contextual comments.

2. **Manuscript Refinement**: I provided advisory guidance on Jiaxin (Suzie) Liu's manuscript refinement.

3. **Submission Guideline**: I provided guideline on the submission to Journal of Cultural Economic.

As a co-author, I, Ruth Rentschler, have reviewed and approved this statement and have provided my consent for the inclusion of the article in Jiaxin (Suzie) Liu's PhD thesis.

Signatures of Co-author:

(Professor Ruth Rentschler)

Date: 23 January, 2025

Statement of Authorship

This is to certify that the co-authored paper titled '*Leveraging Entrepreneurial Identity and Technology: Legitimacy of Art Securitization Platforms*' included as Chapter 3 in Jiaxin (Suzie) Liu's thesis, titled in the thesis '*Gaining and maintaining legitimacy in the art market*' is her own work. The study was published by *Journal of Cultural Economics* in January 2025. Jiaxin Liu was the primary contributor to this paper, contributing more than 80% of the study. My contribution as Jiaxin (Suzie) Liu's principal supervisor is summarised as follows:

1. **Manuscript Review**: I provide comments on the early drafts of the paper. Including structural, grammatical, and contextual comments.

2. **Manuscript Refinement**: I provide advisory guidance on Jiaxin (Suzie) Liu's manuscript refinement.

As a co-author, I, Boram Lee, have reviewed and approved this statement and have provided my consent for the inclusion of the article in Jiaxin (Suzie) Liu's PhD thesis.

Signatures of Co-author: 

Date: 23 Jan 2025

Appendix 3 Statement of Authorship for Chapter 4

Statement of Authorship

This is to certify that the co-authored book chapter titled '*Are art investors rational? Investor sentiments and art returns*' included as Chapter 4 in Jiaxin (Suzie) Liu's thesis, titled in the thesis,' *Gaining and maintaining legitimacy in the art market*' is her own work. The study was accepted by the edited volume *Law and Finance in International Art Markets: Past and Present*. Routledge. Jiaxin (Suzie) Liu was the primary contributor to this paper, contributing more than 80% of the study. My contribution as Jiaxin (Suzie) Liu's principal supervisor is summarised as follows:

1. Manuscript Review: I provided comments on the early drafts of the paper. Including structural, grammatical, and contextual comments.

2. Manuscript Refinement: I provided advisory guidance on Jiaxin (Suzie) Liu's manuscript refinement.

As a co-author, I, Ruth Rentschler, have reviewed and approved this statement and have provided my consent for the inclusion of the article in Jiaxin (Suzie) Liu's PhD thesis.

Signatures of Co-author:

(Professor Ruth Rentschler)

Date: 23 January, 2025

Statement of Authorship

This is to certify that the co-authored book chapter titled '*Are art investors rational? Investor sentiments and art returns*' included as Chapter 4 in Jiaxin (Suzie) Liu's thesis, titled '*Gaining and maintaining legitimacy in the art market*' is her own work. The study was accepted by Law and Finance in International Art Markets: Past and Present. Routledge. Jiaxin (Suzie) Liu was the primary contributor to this paper, contributing more than 80% of the study. My contribution as Jiaxin (Suzie) Liu's principal supervisor is summarized as follows:

1. **Manuscript Review**: I provide comments on the early drafts of the paper. Including structural, grammatical, and contextual comments.
2. **Manuscript Refinement**: I provide advisory guidance on Jiaxin (Suzie) Liu's manuscript refinement.

As a co-author, I, Boram Lee, have reviewed and approved this statement and have provided my consent for the inclusion of the article in Jiaxin (Suzie) Liu's PhD thesis.

Signatures of Co-author: [redacted]

Date: 23 Jan 2025

Appendix 4 Ethical Approval Letters

Dear Suzie,

APPROVAL: Negligible Risk Ethics Application: 005/2022; LIU, Jiaxin (Suzie): 'Owning a Masterpiece for the Price of a McDonald's Meal: Investing in Fine Art with Online Art Securitization Platforms'

Thank you for submitting your Negligible Risk Ethics Application.

Your application has been reviewed by the UniSA Business Ethics Committee and we are pleased to advise it has been ***APPROVED*** with the following amendment:

- ***Applicant to include consent to record clause on the consent form***

Your UniSA Ethics Number for the application is **005/2022** for your records and consent/participant information forms (if required). As you have now received ethics approval, your research project may now proceed.

Please be advised that this approval email is only applicable for the commencement and completion dates in your application. If your project will require additional time, please submit a Request to Extend application no later than two (2) weeks prior to the current completion date.

Kind regards,

UniSA Business Ethics Committee

Dear Suzie

ETHICS EXEMPTION: Negligible Risk Ethics Application: 016-2025; LIU, Jiaxin (Suzie): The art market in the digital age

- Your application has been reviewed and granted an exemption by the Chair based on only using deidentified and publicly available data.

Your UniSA Ethics Number for the application is 016-2025 for your records and consent/participant information forms (if required)

As you have now received ethics approval, your research project may now proceed.

Please be advised that this approval email is only applicable for the commencement and completion dates in your application. If your project will require additional time, please submit a Request to Extend application no later than two (2) weeks prior to the current completion date.

Kind regards,

UniSA Business Ethics Committee

Appendix 5 Interviewee Consent Form

CONSENT FORM FOR AN INTERVIEW

1. Information on the research project

You have been invited to participate in the following research project:

Gaining and Maintaining Legitimacy in the Art Market in the Digital Era

This project is being conducted by:
Jiaxin (Suzi) Liu
UniSA Business
University of South Australia
[redacted]
liujy121@mymail.unisa.edu.au

Summary:
In this research, we investigate the dynamic of art investor's expectations of an art organization in the digital era.

2. Research ethics considerations

Your participation in this research project is strictly voluntary. You have the right to refuse to answer any of the questions. In addition, you may ask to end the interview at any time, in which case the researcher would be prohibited from using the information gathered. UniSA Business's Research Ethics Board has determined that the data collection related to this project meets the ethics standards for research involving humans. If you have any questions related to ethics, please contact UniSA Business Ethics Committee. Do not hesitate to ask the researcher any questions you might have.

3. Confidentiality of personal information gathered

You should feel free to answer the questions frankly. The researcher, as well as all other members of the research team, if applicable, undertake to protect the personal information obtained by ensuring the protection and security of the data gathered from participants, by keeping all recordings in a secure location, by discussing the confidential information obtained from participants only with the members of the research team and by refraining from using in any manner data or information that a participant has explicitly requested be excluded from the research.

Furthermore, the researchers undertake not to use the data gathered during this project for any purpose other than that intended.

Please note that by consenting to participate in this research project, you also consent that the data gathered may be used for future research projects, subject to approval of any such projects by UniSA Business Ethics Committee.

All persons who may have access to the content of your interview, as well as the person in charge of transcribing the interview, have signed a confidentiality agreement.

4. Protection of personal information in the publication of research results

The information that you provide will be used to produce a document that will be made public. Although the raw information will remain confidential, the researcher will use this information in the work submitted for publication. It is up to you to indicate the level of protection of your personal information that you would like with regard to the publication of the research results.

- **Level of confidentiality**

Your name, specific title and the name of your organization may be mentioned. However, you may choose to have only your role disclosed. But, even if your name and the name of your company is not mentioned, you should not expect complete anonymity to be protected in this case.

□ **I give my consent for my name, role and affiliation to be disclosed in the dissemination of the research results.**

□ **I give my consent for only my role to be disclosed in the dissemination of the research results.**

- **Consent for audio recording of the interview:**

□ **I give my consent for the researcher to make an audio recording of this interview.**

□ **I do not give my consent for the researcher to make an audio recording of this interview.**

You can signify your consent either with your signature, by email or verbally at the beginning of the interview.

PARTICIPANT'S SIGNATURE:

RESEARCHER'S SIGNATURE:
Jiaxin (Suzie) Liu, UniSA Business

Appendix 6 Acceptance Proof of Chapter 4

Your contribution to the book Law and Finance in International Art Markets
From: Elisabetta Lazzaro <elisabetta.lazzaro@uca.ac.uk>
To: Jiaxin Liu, Ruth Rentschler, Boram Lee
Date: 2 May 2024, 12:05am

Dear All,

I am returning your essay on behalf of the editorial committee. Thank you for your patience in waiting for our reply.

I also attach the forms that we kindly ask you to fill out. [Publication Permission Declaration Form Attached]

Thank you so much for all your hard work in getting this book to this stage. We are looking forward to submitting it in the early autumn.

With all best wishes

Elisabetta, Adriana and Nathalie

Professor Dr Elisabetta Lazzaro
Professor of Creative and Cultural Industries Management
Head of Arts & Creative Ecosystems research & innovation cluster (ACEs)
Co-head of Researching Art Markets past & present: Tools for the future (RAM-T)
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Appendix 7 Acceptance Proof of Review of Chapter 4

Review outcome to the book Law and Finance in International Art Markets
From: Elisabetta Lazzaro <elisabetta.lazzaro@uca.ac.uk>
To: Jiaxin Liu, Ruth Rentschler, Boram Lee
Date: 17 Feb 2023, 12:05am

Dear All,

I am returning your essay on behalf of the editorial committee. Enclosed please find the reviewers' comments and recommendations.

Our main concern, apart from specific points raised, is that everyone references in the APA style and in particular only uses footnotes in a limited way. Could you check that you do not use footnotes too frequently and that they are not too long?

Could you also check your wordcount and ensure that the length, including footnotes is between 5000 and 7000 words but no more.

We would like to receive the next draft by the end of June, which we hope will give you time to carry out the suggestions and editing.

With all best wishes

Elisabetta, Adriana and Nathalie

Professor Dr Elisabetta Lazzaro
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