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**What are the challenges of establishing the Fair Market Value (FMV) of Guggenheim Founding Collection? If the transparency of an asset value is possible on Non-Profit Financial Year Report, how can the FMV preserve the continuity of public art patronage, in spite of, deaccession artwork from the Guggenheim's collection being sold on the auction market?**

Leng Ho

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Master Thesis Core Enquiry:

What are the challenges of establishing the Fair Market Value (FMV) of Guggenheim Founding Collection? If the transparency of an asset value is possible on Financial Year Reports, how can the FMV preserve the continuity of public art patronage, in spite of, deaccessioning artwork from the Guggenheim's collection being sold on the auction market?

Abstract:

A collector's financial interest in purchasing works of art is often motivated by potential return on investment. These collectors have heard countless stories of others gaining huge financial returns after consigning rare works of art from a museum collection. In recent decades, rising debates on the capitalizing of museum collections to gain financial assets allude to long-term negative repercussions. Those opposed postulate that art patron will lose trust in a museum's ability to care for its publicly-owned collections. Deaccession is a difficult research topic, attempts to resolve any conflicts of interest in the matter of selling cultural work of art that belongs to the public, proposes more than hypothetical measures and analyses. The core enquiry for this empirical research explores the hypothesis that the deaccession of artworks from a museum collection is acting as a disruptor in the art auction market and it mandates the establishment of best practices when determining the Fair Market Value (FMV) of a museum collection. Identifying the FMV would allow museums to quantify the financial value of their collections and create greater transparency on what the public may lose access to. It would also regulate art prices in the instance of deaccession. The preface will outline how art has evolved into the financial asset class and examine why museums selling their artworks on the auction market. Research findings exhibit art appraisal valuations of works from the Solomon R. Guggenheim Founding Collection and reveal the effects of a deaccession artwork sold on the art auction market including derivative price indices. This valuation report includes an analysis of data and calculations used to evaluate the Guggenheim Founding Collection. The FMV valuation of this collection evaluates the specific auction price nature of each piece of art in order to determine the hypothetical

earnings should the Founding Collection face deaccession. The report uses methods of property valuation (i.e. comparables, price per square foot, recent price transactions, moving average percentage, relative standard deviation, blockage discount, damage and loss in value) to assess the FMV of all individual artworks collected by Solomon Guggenheim under its Founding Collection. The final analysis concludes an “insider” report on works from one specific artist, Vasily Kandinsky. An investigation into deaccessioned artworks by Kandinsky from the Guggenheim Founding Collection frames the supporting argument of this core enquiry. Kandinsky’s works are among the most frequently deaccessioned across multiple museums internationally.

## TABLE OF CONTENTS

|   |    |
|---|----|
| PREFACE   | 04 |
| PUBLIC SURVEY   | 15 |
| <br>  |    |
| <u>CHAPTER 1: MUSEUM COLLECTION MANAGEMENT</u>                    | 21 |
| A Brief History of S.R. Guggenheim Founding Collection            | 22 |
| ICOM & AAMD Museum Collection Standards / Ethical Guidelines      | 23 |
| S.R. Guggenheim Foundation Collection Policy                      | 24 |
| Deaccession Sales Record of Guggenheim Collection                 | 25 |
| <br>  |    |
| <u>CHAPTER 2: NON-PROFIT FINANCIAL YEAR REPORT</u>                | 27 |
| FASB reporting standards & Sarbanes-Oxley Act on 990 Tax form     | 28 |
| Reading Guggenheim 501(c)3 Non-Exempt Tax Forms 990               | 29 |
| Affiliate and Audited Consolidated Statement of Position          | 30 |
| Financial Statement Analysis Fiscal Year Report 2014-18           | 31 |
| <br>  |    |
| <u>CHAPTER 3: VALUATION OF COLLECTION</u>                         | 33 |
| Finding Comparables from Online Art Auction Database              | 35 |
| Logic, Terms and Conditions of Fair Market Value                  | 36 |
| Steps to Find the FMV of a Museum Artwork                         | 41 |
| Limitations and Evaluation of Guggenheim's Collected Artists      | 45 |
| Auction Sales Analysis of Vasily Kandinsky's Deaccession artworks | 49 |
| <br>  |    |
| CONCLUSION  | 57 |
| BIBLIOGRAPHY  | 60 |
| ILLUSTRATIONS   | -  |

## Preface

*“A painting has no value except the pleasure it imparts to the person who views it.”*

– Dr. Albert Barnes, 1922, The Barnes Foundation

In recent years, the incentives that motivate acquisitioning art differ from those of collectors from the post-WWI generations. A study shown (H.Rush 1961) from 1741 to 1945, thirty-six authentic paintings by Jan Vermeer were solely held by private hands for personal enjoyment. As the years progressed, the number of privately-owned Vermeer paintings declined and most ended up in a museum collection. There was a great deal of art collected in the United States during the early 20th century and the most meaningful way to remember these post-industrialist collectors, such as, Albert Barnes, J.P. Morgan, Solomon Guggenheim, Andrew Carnegie, Henry Frick, etc., was by building museums under their legacy. After all, one could not bring all his wealth to the grave. Today, an auction sale of a Picasso or a Monet correlates with an opportunity for sudden financial gain which ties in to the (Mei Moses 2001) notion that trading art in the auction market is as profitable as trading stocks.

There has been much scholarly research and many documentaries created on the topic of collecting art. This piques audience curiosity concerning the myth that owning art is reserved strictly for rich elites. (H.Rush 1961) “The general public has long considered art belongs to an elite group of intellectuals who seemed to be the only ones who could really understand and decipher the otherwise unintelligible abstractions that some extreme modern and contemporary artists produce.” Most published articles do not disclose the hidden patriarchal nature of a personal collection owned by high net worth individuals. Moreover, this ambiguity proliferates that private collectors are buying art specifically for decorative purposes in line with one’s symbolic status in wealth, class and society. (Delbourgo 2016) Art is no longer the mere status symbol it was in the age of J. P. Morgan, a highly regarded post-industrialist collector. Instead, as demonstrated by hedge-fund

billionaire Steven A. Cohen's record of hedging art including amassing \$1 billion worth of art collection. Art has become an instrument for generating wealth and influence in the interest of forming a plutocracy in the art world. Due to Cohen's success, he is well recognized in the art world and he gained a seat on the Sotheby's Board of Directors.

While there is disagreement between art historians and academics about the transparency of art pricing and the collateral risk of buying artworks, oftentimes, they are not exposed to existing IFRS or GAAP accounting practices (e.g. FASB in U.S). A purchased artwork on credit loan is recorded on the UCC filings of auction houses' private sales<sup>2</sup>. Due to the privacy and confidentiality clause between private collectors and houses, UCC filings of the collaterals value are not publicly disclosed. Unless under special circumstances, UCC lien filings<sup>3</sup> declare an upcoming auction sale of a lender who formally lay claim to the collateral that a debtor pledges to secure their financing. Magnus (Resch 2015) propagated that it is problematic to assume the value of art is predetermined by an exclusive corresponding market cosseted to high-net-worth individuals and high-profiled art dealers. This assumption is also brought up by Olav's (Velthuis 2005) 'Talking Price', he wrote about art pricing scripts' increment of 10 to 15% in price value with every artwork sold are commonly manipulated by gallerists. The initial value of a scripted artwork is based on the living artist's credentials, i.e. history of sales, awards, exhibitions and publications. He indicates that art prices are also based on a speculative financial diagnosis, using quantitative data gathered on the trajectories of hedonic price points from the primary art market. However, a comparative methodology written by Melaine (Gerlis 2014) recommends that the asset category of art should be comparable to other equivalent asset classes such as commodities i.e. gold or precious metals, and also be defined by the oeuvre of artists' popularity. Determining collateral risks requires more than conventional due diligence which includes checking of authentication, provenance, sales transaction history, and the exclusive fiduciary relationships with whom the good faith purchase is from. Most evidently, it also requires a fair market valuation to find the appropriate present

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<sup>1</sup> <https://fortune.com/2016/10/22/steve-cohen-art-billionaire-point72/>

<sup>2</sup> <https://www.artnews.com/art-news/market/who-borrows-against-art-hundreds-of-galleries-individuals-and-foundations-do-track-them-with-skates-art-loans-database-5021/>

<sup>3</sup> <https://www.fundera.com/blog/ucc-filing>

value of the artwork. (William N. Goetzmann 2018) resonates the collateral risk and return characteristics of works of art are compared favorably to those of traditional financial investments during an economy downturn, such as property, stocks and bonds. As these scholarly findings show the value of art has been characterized and often misinterpreted as an investment vehicle as opposed to an asset class of unpredictable value.

The quintessential question of whether art is an asset can only be determined by the favorable return that it would generate and whether its attainment can be represented in a legally enforceable contract outlining an agreement of the asset classification. Art is categorized as collectibles under real assets in financial terms; its value is based upon the physicality of a tangible object. Real assets<sup>4</sup> are claims on physical non-exhaustive investment assets i.e. real estate, commodities, antiquities, precious metals and stones. On the other hand, auction houses and credit lenders are regarding art as financial assets. Financial assets are recorded on typically paper or electronic claims by the issuer. The issuer could be a public sector and government agency, or a supranational e.g. World bank or a private sector corporation e.g. Berkshire Hathaway Inc. Financial assets<sup>5</sup> are broadly classified under the asset classes of interest-bearing debt securities such as corporate or personal debt, equity funds and derivative instruments – fixed rate bonds, certificates of deposit, commercial paper and debentures. Museums and nonprofit institutions do not currently record their permanent collections as either real or financial assets.

Although, the purpose of art is not best known by the greater public for its investment potential, this is not the case for collectors seeking an alternative source of long-term “private equity.” With art prices sky-rocketing to remarkable price points at auction sales, many collectors realize the value of their artworks could increase substantially. This led to the trend of tapping into specialized art advised wealth management. Rather than selling art, collectors can use the proceeds from an art loan to purchase additional artworks, raise cash, refinance debt, diversify an investment portfolio, or fund new business venture, divorce lawsuit, and death or estate taxation. The art credit

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<sup>4</sup> Definitions of asset class, CFA level 2 – Investment management and portfolio concepts

<sup>5</sup> Ibid

lending business is not a new phenomenon. When Jeffrey Deitch<sup>6</sup> started the art finance department at Citibank in 1979, he elevated the art lending and advisory business in the U.S. to higher grounds after learning about the hedging of the British Rail Pension Fund<sup>7</sup>. The pension fund entered into the art market in mid-1970s. It purchased and held works of art by old masters and raised £ 30.9 million, nearly half of its original investment two decades ago, after selling its entire collection within three auction sales at Sotheby's in early July 1996. Also, Robert Scull's<sup>8</sup> auction sales of living artists' work in October 1973 was the catalyst for shaping the contemporary art market as we know it today. He sold fifty artworks from his pop art collection that yielded \$2.2 million. He was the first individual to sell living artists' work by method of live auctioning.

The history of flipping art as legitimate financial assets empowered the growing acceptance of art collecting to expand a personal investment portfolio. This instigated new art finance services emerging from commercial banks and auction houses. Both longstanding financial institutions are competing for collectors who have substantial artworks are experiencing debt. Such collectors may work with these institutions to consign their pieces in exchange for fast liquidity. The auction market is basically an open market place for buyers who are qualified as creditworthy or are long-time house patrons. These buyers are able to participate in live bidding with a registered paddle number in an auction sale. The rate and speed of bids increases during live auction can be difficult to predict. Live auctioneering works like the buying and selling on the stock market exchange floor. (Delbourgo 2016) It is generally believed, based on empirical data, that hammer prices could increase by approximately 20% for each additional bidder participating in a sale. Auction houses have been trading art as financial assets since 1674. They function as art exchanges and predominantly for sell high-valued items previously owned by people whose main reasons of consigning their artworks are death, divorce, or debt. However, for this paper, I would strongly recommend adding 'deaccession' as the fourth 'D' to the three Ds' effect. The fundamental research plays an important role in uncovering whether there is

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<sup>6</sup> Artsy 2017 Article on 'How Jeffrey Deitch, Citibank, and Christo Created the Art Market as We Know It'

<sup>7</sup> Wallstreet Journal 1996 article on 'British Pension Fund's Bet n Art Pays Off Respectably'

<sup>8</sup> <https://www.nytimes.com/1986/01/03/obituaries/robert-scul-prominent-collector-of-pop-art.html>



such an index that tracks artworks deaccessioned from museums specifically. Using selected online auction price databases, we will find out the reliability and accuracy of records.

Capitalizing prestige provenance on art collections have affected price volatility in the art market. The researched hammer prices from Artprice, artnet and SCIPIO show how price points on deaccession artworks often surpassed the FMV. (Coslor 2009) A sociologist made claims of the cost of capitalizing art far outweighed the benefits of preservation in a museum collection. Capitalization of art consequently became a money game, as hedging against art since the turn of the 21st century led to the trend of flipping art as quick investment over a love of collecting. As a public collection is usually compiled of gifted works, donated mostly by loyal patrons of the non-profit art organization, the practice of assigning an asset value of a museum collection is prohibited by FASB reporting standards. Such eminent collections would procure a tremendous net value. It is without a doubt that the net asset value of a museum permanent collection should be recorded as “priceless” in non-exempted tax 990 forms submitted for end of year income taxation. This is reinforced by (AASLH 2003) Statement of Professional Standards and Ethics: “Collections shall not be capitalized or treated as financial assets.”

Financial interest is widely publicized in the art world, often generated by the unprecedented auction hammer prices and financial returns, whenever rare works of art from a museum are consigned. Is a deaccession artwork from museum collections, a disruptor in the auction market? Should museum provenance be considered a key determinant in value increment that challenges the price elasticity of demand in auction estimates? Does museum quality art appreciate in face value that fetches higher auction prices than privately-owned art? Debates on capitalizing museum collections as financial assets propelled long-term negative repercussions. Museums that gained proceeds from deaccessioning, would gradually break the trust of art patrons who wish for long-term preservation of its publicly-owned collections. Also, deaccession artworks’ hammer prices incur exponential value in the Post War Modern and Contemporary art category, which normatively disrupts the fair market estimated values that lead to pricing inconsistencies at

auction sales. (Elizabeth Keating 2001) The lack of public disclosure of a museum collection's asset value could unfold a series of issues, such as, further complexities in art appraisal valuations, inadequacies in accounting practices, arising security concerns, and compromised donor intentions. The new ecosystem of art transactions is changing how non-profit institutions govern their ethics and care of its collection as stewardship to the public patrons. We shall discuss FASB accounting practices and Sarbanes-Oxley Act of how these regulations dictates specific financial reporting standards in U.S. for non-profit exempt tax 501(c)3 990 forms. In the reading of Guggenheim's form 990, a fiscal year-end report from 2014 to 2018 is analyzed to defend notion introduced by Rachel (Livedalen 2018). She voiced that U.S. museums do not record the value of their permanent collection as a net asset on their tax form 990s, uncovered the lack of transparency in collection asset value, deaccession sales prices, and how earnings were applied to new acquisitions.

Deaccessioning quantified from (Association 1999) is a procedure which a museum undertakes cautiously and with due ethical processes. The reasons for deaccessioning need to be rigorous, such as, when a museum is changing its curatorial focus and mission statement in accordance to the change of leadership and art movement. These reasons must be approved by the board of trustee. Such a change in focus could result in deaccessioning objects in a collection which no longer align to the museum's new direction. However, by auctioning off museum quality pieces that are sold into private hands, to aid museum funding, is deemed inadequate and definitely not a long-term plan. Overtime, if deaccessioning is the only easy way out to raise necessary funds, this draws red flags to the public art patrons. Ultimately, we will lose access to the museum's patrimony, and it is impossible for other non-profit institutions to acquire back these priceless collections. Jerry Saltz's interview on the price of everything: "Auction sales artworks are too expensive for any institutions to buy, it's going to hang in some apartment in London, Shanghai, or New York. I will perhaps never be going to see the art in my lifetime."

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<sup>9</sup> <https://www.hbo.com/documentaries/the-price-of-everything>

The landmark lawsuit in 2013 of Detroit Institute of Arts *In re City of Detroit*, 524 B.R. 147<sup>10</sup> stood out in its defiance to AAM guidelines as the purpose of deaccession was to mitigate any outstanding municipal debt obligations to Detroit City's creditors. (Collins 2016) It is famous for its extensive collection of American art since its founding in 1885. The collection consists 582 works staked for deaccessioning including works by Rembrandt van Rijn and Pieter Bruegel. It also included a self-portrait of Vincent Van Gogh, *The Window* by Henri Matisse, and an extensive collection of German expressionist works by Wassily Kandinsky and Edvard Munch, which were among the first paintings by these artists to enter a public collection in America. Over the years, the Institute had been the beneficiary of well-known Detroit families, including the Fords, the Dodges, and the Firestones, and the founder of Macy's. The lawsuit involved expert art appraisers from Christie's auction house, Winston Art Group, Artvest Partners LLC, and Victor Weiner Associates LLC to value the entire collection. The valuation processes were absolutely complex and caused career displacements of some appraisers. The staggering final valuation amounts totaled to over 8 billion dollars. It is published in the affidavit that artworks purchased after 1919, the date the museum was transferred to the City of Detroit, were available for deaccession. The creditors believed that the City Council was the executive executor of the museum collection and could approve such a sale. However, this agreement became null after protests from state residents. It came to light that the art was a part of a public trust for the people of the State of Michigan. Selling the art to repay the city's debts would violate the city's own 1919 agreement with the Institute and would undercut the purpose of this trust by jeopardizing Detroit's most important cultural asset.

Relevant to the topic of bankruptcy as a driver for deaccession and art as loan collateral. The New-York Historical Society<sup>11</sup> used part of its collection as collateral to secure a \$1.5 million loan from Sotheby's in 1993 to alleviate its debt. Nevertheless in 1995, just two years after, it sold 176 Old Master paintings from its on-credit loan

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<sup>10</sup> <https://casetext.com/case/in-re-city-of-detroit-13>

<sup>11</sup> New York Times 1993 Article on The Historical Society Is Criticized for Using Artworks as Collateral

collection for \$12.2 million<sup>12</sup> at Sotheby's New York auction house. Although such sales were necessary to avert a financial crisis at the depleted institution, the society was heavily criticized and temporarily closed. When in times of financial distress, it is possible for a museum to use deaccessioned works of art as loan collaterals by borrowing from the auction house, however, the artworks are severely undervalued as opposed to comparatively high-valued real estate lines of credit. In a casual interview with a specialist from one of the auction houses, he mentioned the estimates for museum deaccession artworks are always conservative. This is mainly for marketing purposes. As authentication for antiquities is extremely difficult, for most cases, it is not related to forgeries. Appraisers care more about the dating of the art object, whether it is made in the 17<sup>th</sup> century vs 18<sup>th</sup> century. If there is a disagreement with tangible proof, the house will seize the piece and refund the buyer, as well as, blocking a suspicious consigner's account.

The recent Sotheby's Asia week auction sale<sup>13</sup> had sold over three hundred items from Metropolitan Museum of Art's Florence and Herbert Irving Chinese art collection in less than a week in early Fall 2019. The total sale amounted to \$8.27 million including buyer's premium. In 2017, just two years before Florence Irving's death, the old couple made a bequest of more than \$80 million<sup>14</sup> to establish an unrestricted endowment fund for MET's acquisition fund. "Bite the hand that feeds you." If one would to visit MET's Florence and Herbert Irving Asian art section in the right wing, on public exhibition is showing a range of digitally printouts of ancient Chinese paintings of the sixteen *Luo Hans*<sup>15</sup>. Why is a museum showing replica prints instead of the real paintings? The MET always seemed to have difficulty with cash funding ever since the controversy of its selling of Max Beckmann<sup>16</sup>'s painting in 1973, whether it is for pertaining to new acquisition or sustaining its annual operating cost of \$103.82 million. From all my searches on various past auction price databases, MET is listed constantly as one of the selling consigners suggesting there is regular deaccession.

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<sup>12</sup> LA Times 1995, Scandal or Salvation? More and more institutions are selling off artworks. Are they just cashing in, or is it part of their mission?

<sup>13</sup> <https://www.sothebys.com/en/auctions/2019/chinese-art-from-the-metropolitan-museum-of-art-n10112.html>

<sup>14</sup> <https://www.metmuseum.org/press/news/2017/irving-gift>

<sup>15</sup> <https://www.metmuseum.org/art/collection/search/64012>

<sup>16</sup> <https://www.wnyc.org/story/review-max-beckmann-brief-intense-new-york-years/>

The suicide of Mark Rothko in 1970 led to a series of painstaking lawsuits *Matter of Rothko*, 84 Misc. 2d 830<sup>17</sup> that spanned over thirteen years after his death. The case was held in the battle of Rothko's estate against its self-dealing executors and Marlborough gallery for misappropriating illicit sales of Rothko's remaining 100 oil paintings. His daughter, Kate, fought for her father's legacy and rights as one of the most prolific abstraction artists from the U.S. While researching on the topic of museums deaccessioning, I came across SFMoMa had recently deaccessioned Rothko's<sup>18</sup> artwork *Untitled 1960* and was sold at Sotheby's for \$50 million in 2019. There is no artist resale right<sup>19</sup> in the U.S., by and large, artworks sold in the secondary market only benefit the collectors, dealers and auction houses. The driving force for a living artist to work continuously is what matters in the long term. Having their works exhibited or owned by museums as "the gate keepers of culture" make these artworks matter. (Gammon 2018) It is important for artists whose reputations may depend on the grant of museum endorsement. If the gate keepers could not safe guard the works of a legendary artist, living artists cannot fully depend on museums to protect the meritocracy of true artistic value.

It is vital to integrate the understanding of past discourse surrounding museum deaccessioning of art into this argument and analysis. These summarized case studies beg the question who controls the power to decide when it is appropriate to deaccession. Does the power lie within the people of the state of Michigan, to stop the city council to sellout the entire DIA permanent collection in the expense of saving the city of Detroit, as in the case of the Detroit Institute of Art? Or does the power lie within the board of trustee to break the oath of its founder's *de rigueur*, and sell whatever art objects kept in storage necessary to recover debt, as in the case of New York Historical Society? Also, to what extent of abusing the original intent of a gift does power lie within the hands of the donor or the artist, as reflected upon in the cases of the MET and Rothko?

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<sup>17</sup> <https://casetext.com/case/matter-of-rothko-13>

<sup>18</sup> <https://www.nytimes.com/1984/05/04/arts/rothko-foundation-gives-1000-works-to-19-art-museums.html>

<sup>19</sup> <https://itsartlaw.org/2019/07/01/its-not-that-easy-artist-resale-royalty-rights-and-the-art-act/>

Quoting from Foucault, “Power is not an institution, and not a structure; neither is it a certain strength we are endowed with; it is the name that one attributes to a complex strategical situation in a particular society.” Through interrogating how power within a patriarchal ideology leads to a particular representation of art collection as investment within the art market and how this is fed into and interpellated into the museum world. These significant cases connect us to the concepts of breach of fiduciary duty, collateralizing public collection for liquidity loan, and excessive deaccessioning dead donors’ gifted collections; implicates the dissidence of a state’s laws, AAMD’s accredited standards, FASB reporting regulation, and basic moral virtues.

My initial contention for this thesis paper was to conduct a feasibility study on how much monetary value a museum may gain by leveraging their permanent collection as financial assets. This could include using the collection as collateral to obtain a short-term loan from the different recourse or non-recourse art-secured lenders instead of immediately being subject to lose the artworks. It would give a museum additional time to avoid the process of deaccessioning. Unfortunately, the idea proved to be obscure because firstly, the banks will not agree to collateral loans for this purpose, secondly by AAMD standards, a museum collection is not supposed to be regarded as financial assets for investments. The initiative of this research is inspired by John Canaday’s New York Times article<sup>20</sup> on deaccessioning titled “Very Quiet and very dangerous”. He wrote about “[...] the practice is widespread and is carried on significant scale” in American museums—“but the rule is, keep it quiet.” It was partially written about Guggenheim’s decision to “sell from strength” several of its many Kandinsky works since 1970s, which recapitulates the conundrum of my thesis enquiry to find out what is the remaining number of Kandinsky’s works in the Guggenheim collection. Most of the research materials are studies based from art valuation, auction business, museum studies and finance valuation modelling.

In the final chapter, Valuation of Collection Report, investigates an appraisal valuation of a museum deaccession artworks that may perturb auction price estimates.

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<sup>20</sup> <https://www.nytimes.com/1972/02/27/archives/very-quiet-and-very-dangerous.html>

Pertinently, solving the challenges of searches for comps during the process of establishing the FMV of Guggenheim Founding Collection. In the sections “Finding Comparables from Online Art Auction Database,” “Logic, Terms and Conditions of Fair Market Value,” “Steps to Find the FMV of an Artwork,” and “Limitations and Evaluation of Artists,” explain the experiment of data and calculations that support the valuation report. By valuating the Guggenheim collection as a test subject using the similar methods of property valuation (i.e. comparables, price per square foot, recent transactions, moving average percentage, relative standard deviation, blockage discount, damage and loss in value), we find the specific auction price nature of each piece of art and its FMV. The concluding report will assess the FMV of Vasily Kandinsky’s deaccession artworks from Guggenheim collection in comparison with the hammer prices and premiums pertaining from past recent comparables. It serves as evidence which support these findings and the argument of deaccession artworks disrupting future auction prices.

## Public Survey

Many factors have contributed to the lack of museum funding, for example, declining patronage from individuals, foundations, corporations and government's support for the arts after Reagan's 50% budget cut to the National Endowment for the Arts in 1981. Gathering public opinion is crucial to understanding why there is low attendance to a museum. Museums are the only nonprofit art institutions often scrutinized for their position as "gatekeepers of culture" and struggle with the basic earned income from general admission. For the core purpose of this research, an online public survey is conducted to observe and understand the American public's views on their experiences and knowledge about non-profit museums. The survey responses are collected from 36 participants who are aged between 20 to 70 years old from various backgrounds. The questions were:

1. Why do you visit museums?
2. How many times in a year would you visit a museum?
3. Do you usually pay for your entry to the museum?
4. Do you think museum entry should be free?
5. Do you know how public museums get their operation funding?
6. Where do you think the museum collections are from?
7. What is your favorite museum & do you know the museum's history and mission?
8. What is your favorite part of the museum?
9. What activity in the museum makes the most memorable experience during your visitation? Do you have a short story to share?



## Why do you visit museums?

Answered: 36 Skipped: 0

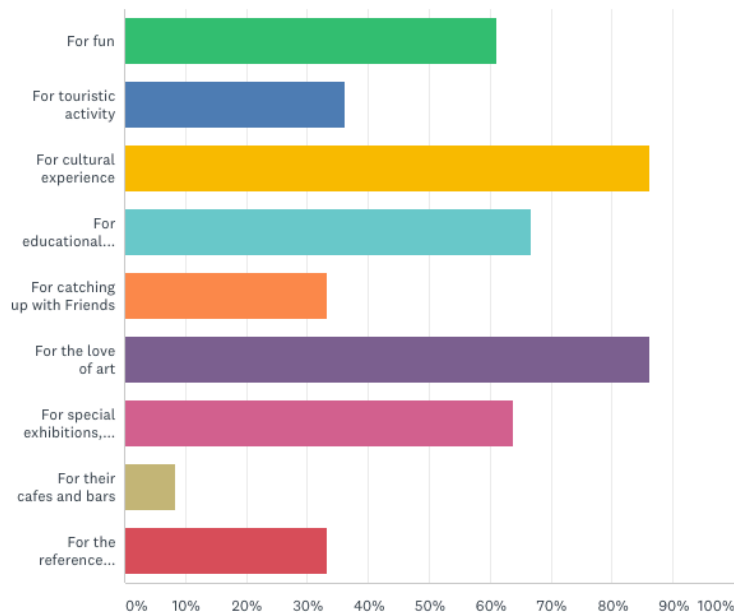


Figure 1- Why do you visit museums?

Question 1 is a multiple choices selection of nine reasons of visiting a museum. Participants could select multiple answers. Reasons such as for fun, touristic activity, cultural experience, educational purposes, catching up with friends, for the love of art, special exhibitions, events - artist talk, classes, panel discussion, curatorial tour, cafes and bars, and for the reference library. 31 participants answered for cultural experience and for the love of art. About 63% on the medium average, chose for fun, educational purposes, and special exhibitions, events. This gives us an insight that the general patrons are not unintelligent masses but people who want a learning experience while on a museum visit.

## How many times in a year would you visit a museum?

Answered: 35 Skipped: 1

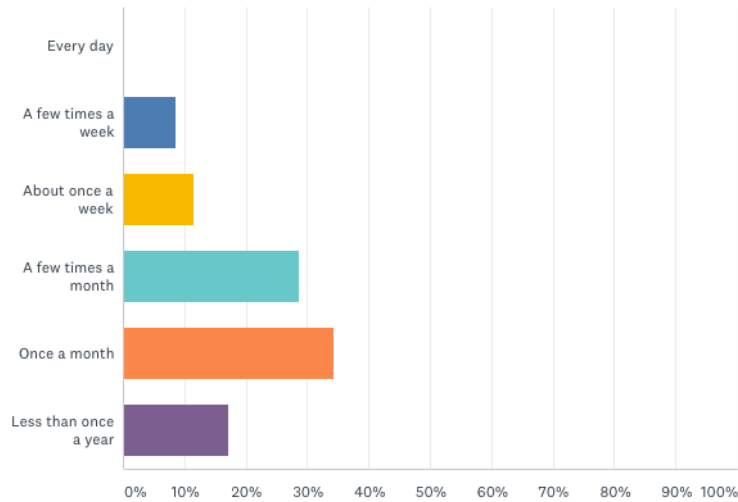
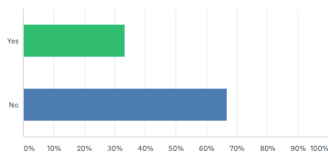


Figure 2 - How many times in a year would you visit a museum?

Question 2 analyzes the frequency of visitation of a single participant. Twelve people chose once a month, ten chose a few times a month, six chose less than once a year, and four chose once a week. Museums are not shopping malls or art fairs. If we look at the numbers presented, the fundamental question is how can museums increase the number of patronage and maintain the frequency of visitation every week?

Do you usually pay for your entry to the museum?

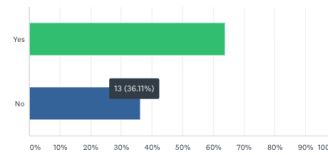
Answered: 36 Skipped: 0



| ANSWER CHOICES | RESPONSES | TOTAL     |
|----------------|-----------|-----------|
| Yes            | 33.33%    | 12        |
| No             | 66.67%    | 24        |
| <b>TOTAL</b>   |           | <b>36</b> |

Do you think museum entry should be free?

Answered: 36 Skipped: 0



| ANSWER CHOICES | RESPONSES | TOTAL     |
|----------------|-----------|-----------|
| Yes            | 63.89%    | 23        |
| No             | 36.11%    | 13        |
| <b>TOTAL</b>   |           | <b>36</b> |

Figure 3 - Do you usually pay for your entry to the museum? Do you think museum entry should be free?

Question 3 and 4, determine who is willing to pay for entry into a museum. It is obvious that majority would like to enter for free. A study<sup>21</sup> shows in UK for fifteen years,

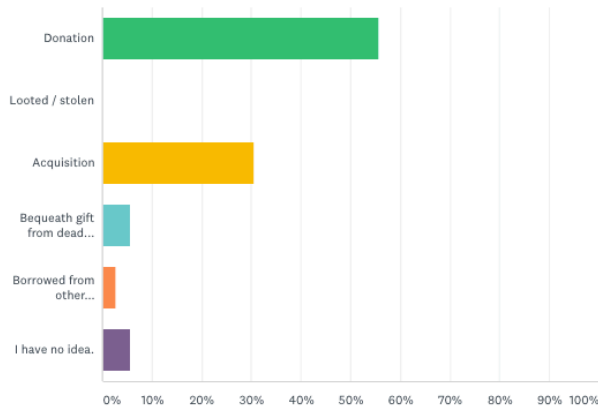
<sup>21</sup> <https://www.museumsassociation.org/campaigns/free-admission-and-the-lottery>

visitor numbers at the free national museums grew spectacularly, showing their permanent collections while some of the museums which charged admission suffered remarkable declines. These free entry museums charges ticketed entry fees for special exhibitions such as solo retrospectives of famous artists, events like artist talks, master classes, academic panel discussions, private curatorial tours, and art performances. By doing so, gain more earned income revenues in the long run.

Question 5 “Do you know how public museums get their operation funding?” is a commentary answer box. 29 participants answered “Yes” and wrote that funding is mainly from the government, taxes, grants, corporates, foundations, donors, and deaccessioning. 80% of responders wrote government as the primary source. The misconception that the U.S government is the main source of funding nonprofit museums is apparent.

Where do you think the museum collections are from?

Answered: 36 Skipped: 0



| QUIZ STATISTICS                            |               |                    |            |
|--|---------------|--------------------|------------|
| Percent Correct                            | Average Score | Standard Deviation | Difficulty |
| 92%  | 1.9/2.0 (93%) | 0.49               | 3/3        |
| ANSWER CHOICES                             |               |                    |            |
| ANSWER CHOICES                             | SCORE         | RESPONSES          |            |
| ✓ Donation                                 | 2/2           | 55.56%             | 20         |
| ▼ Looted / stolen                          | 0/2           | 0.00%              | 0          |
| ▼ Acquisition                              | 2/2           | 30.56%             | 11         |
| ▼ Bequeath gift from dead patrons          | 2/2           | 5.56%              | 2          |
| ▼ Borrowed from other collectors / museums | 1/2           | 2.78%              | 1          |

Figure 4 - Do you know how public museums get their operation funding?

Question 6 examines whether the public knows how a museum attains its permanent collection. Majority answered by donation and second choice is by acquisition. This shows that they are aware of gifted collections from donors.

Question 7 “What is your favorite museum & do you know the museum’s history and mission?” is a commentary answer box. Five answered “MoMA”, five answered “MET”, four answered “Tate Modern”, four answered “National Gallery”, two said “Guggenheim”, two said “Whitney”, the rest named other international museums. The majority of responders did not know the history nor the mission statement of their favorite museums. In this review, museum’s history and missions should be more visible to the public. This will definitely influence greater patronage to existing museum attendees with an understanding of how the museum was founded.

What is your favourite part of the museum?

Answered: 36 Skipped: 0

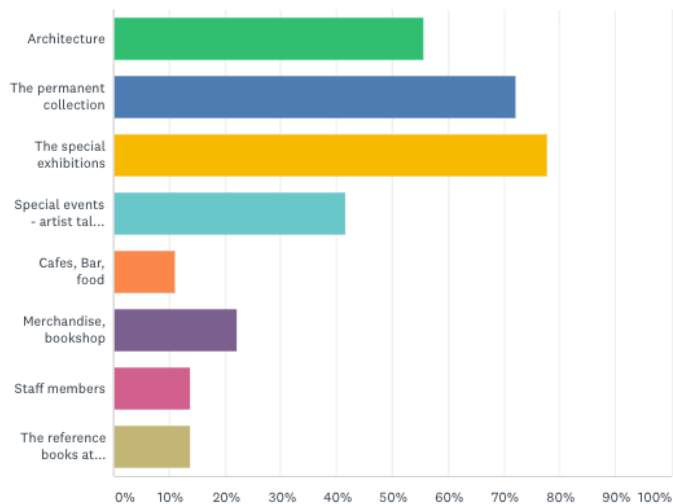


Figure 4 - What is your favorite part of the museum?

Question 8 “What is your favorite part of the museum?” and this is a multiple-choice selection. It assesses which part of the museum intrigues the public to stay a longer time in the vicinity and revisiting in the future. 28 people chose special exhibitions. 26 chose the permanent collection. 20 chose architecture. 15 chose special events. Eight chose for the bookshop, four for cafes and five each chose for staff members and reference

library. It is not surprising to find that majority would visit for special exhibitions of well-known artists, because these are the only times that museums will advertise upcoming artist retrospectives in public spaces, magazines, or on other art related websites.

Question 9 “What activity in the museum makes the most memorable experience during your visitation? Do you have a short story to share?” is a commentary answer box. 20 people answered “the collection and exhibitions.” Answers included: it is inspirational, rare, more interesting with guided tours, and offered a freedom of space. Four participants replied that they were blown away by the participatory live art performance. Five people mentioned the staff members who helped them and enjoyed their chats about the museum. Two replied about enjoying the architecture and the curatorial space. The other four did not have an answer.

## Chapter 1: Museum Collection Management

Museum collection ranks at the top of the collection hierarchy in the art world. Art has more value being accessible on public view than a private collection kept in storage. (Gammon 2018) commented that “museum quality” is a fraught concept that changes in each discrete museum context, the term derived from most deaccessions in US that involved 90% of objects that reasonably should not trouble the conscience of the most discerning critic. The non-profit institution acts as the custodian beholding a state’s or city’s cultural and heritage identity. It protects pristine objects of permanent valued works of art belonging to public donors and taxpayers, and establishes the integrity of collection care in relation to its legacy and mission. Art critic Joseph Hirsch (Alexander 1996) identifies such institutions as “gatekeepers” entities that filter cultural objects as they are classified into the system. The gate keeping role is important in the production of cultural objects. Museum directors and curators are empowered in selecting from the vast array of art that will be included for exhibition or collection of the institution. Hence, culture branding is heavily ingrained in its permanent collection. Museums do not just serve as an overall learning cultural experience, but a public place built distinctively to be an open muse and source of inspiration for everyone who visits.

Famously quoted by (Birchall 2013) On Artistic and Curatorial Authorship, “Exhibition is the fundamental function of a human being, and the fundamental process of art.” The modern-day museum walk-in experiences are not subjugated to the banalities of history, the grandeur of its architecture, or the white elephants of lost civilizations’ artifacts. Rather, these institutions host a revolving body of work that composes artistic merits and exhibit special curatorial themes that enables us to access diverse perspectives. (Bishop 2013) This is to question the present cultural identity, and to realize a different future for the next generation. New acquisitions to an existing collection and installation of such curatorial specified exhibitions are fundamentally high cost, and need unrestricted funding for substantial programming. Apart from the earned income from admissions to run daily operations and building maintenance of the museum, poses challenges to the competing museums along Fifth Avenue to attain patronage numbers in New York City.

## A Brief History of S.R. Guggenheim Founding Collection

This year marks the 60th anniversary of the founding of Solomon Guggenheim Museum, it also coincides with the 100th year anniversary of the Bauhaus movement. The current Guggenheim Founding Collection<sup>22</sup> consists of 35 artists, and a total record of 182 works of art that were either bought directly from the artists, or gifted by Solomon R. Guggenheim's and Hilla Rebay's estates. There was no secondary source of acquisition from a gallery, art dealer or another institution that was mentioned in its provenance and underwriting. Therefore, every accession artwork was collected from the primary market and these artworks formed the core of the Guggenheim's holdings. For example, Kandinsky's *Composition 8* was amongst the first paintings Solomon purchased for his art collection following his visit to Kandinsky's studio in 1929.

The collection was based on the movement of nonobjective art that defines a type of abstract art expresses geometrically visual stimulation and aims to convey a sense of simplicity and purity. (Forgács 1991) The nonobjective paintings, sculptural objects, and prints that Guggenheim collected over twenty years with the help of Hilla Rebay, the Museum of Non-Objective Painting director and curator in 1939, spanned over distinct artistic styles including Bauhaus, Constructivism, Cubism, Futurism, and Expressionism. These subject matters reflected on their interest in the key ideas and fundamental theories of early European modernism. Solomon's direct investiture of artists in the early 1900s before and during the world wars, earned him respect to be one of revolutionary collectors in the art world. In contrast, his successor, Peggy Guggenheim only collected the avant-gardes, decipher the ascendancy of abstraction art in a multitude of ways. She left a critical impact on how artists explore radical forms and contextualization in contemporary art.

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<sup>22</sup> Taken from [https://www.guggenheim.org/artwork/special\\_collection/solomon-r-guggenheim-founding-collection](https://www.guggenheim.org/artwork/special_collection/solomon-r-guggenheim-founding-collection)

## ICOM & AAMD Museum Collection Standards / Ethical Guidelines

Collections management is an important part of museum ethics because there are specific guidelines in regard to their collections. These guidelines cover the care, inventory, and cataloguing of the collections and ensure that museums collect ethically and manage the works well. When it comes to new acquisition or deaccessioning guidelines, there are two governing bodies of museum collection management; AAMD<sup>23</sup> (Association of Art Museum Directors consisting 90 directors) and ICOM<sup>24</sup> (International Council of Museums composed of 3000 institutions and committees in 174 countries).

According to the ICOM Code of Ethics<sup>25</sup> for Museums: “Museums have the duty to acquire, preserve and promote their collections as a contribution to safeguarding the natural, cultural and scientific heritage. Their collections are a significant public inheritance, have a special position in law and are protected by international legislation. Inherent in this public trust is the notion of stewardship that includes rightful ownership, permanence, documentation, accessibility and responsible disposal.”

Museums like many non-profit art institutions struggle to meet their revenue goals. There are rising debates on the topic of deaccessioning circulating in the news. This places AAMD and its long-held ethical standards in a challenging position. They must address what limitations museum should have when considering selling important works of art, like the case of Detroit Institute of Art. As listed<sup>26</sup> below, these associations have each determined to their own degree that all proceeds from sale or auction should be restricted to the future acquisition of collection objects or to the ongoing maintenance of current collection holdings.

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<sup>23</sup> <https://aamd.org/standards-and-practices>

<sup>24</sup> <https://icom.museum/en/>

<sup>25</sup> Ibid

<sup>26</sup> [https://en.wikipedia.org/wiki/Deaccessioning\\_\(museum\)](https://en.wikipedia.org/wiki/Deaccessioning_(museum))



1. According to AAMD<sup>27</sup>: "Funds received from the disposal of a deaccessioned work shall not be used for operations or capital expenses. Such funds, including any earnings and appreciation thereon, may be used only for the acquisition of works in a manner consistent with the museum's policy on the use of restricted acquisition funds."
2. According to the American Association of Museums<sup>28</sup> (AAM): "Proceeds from the sale of nonliving collections are to be used consistent with the established standards of the museum's discipline, but in no event shall they be used for anything other than acquisition or direct care of collections."
3. According to the (AASLH 2003) American Association for State and Local History: "Collections shall not be deaccessioned or disposed of in order to provide financial support for institutional operations, facilities maintenance, or any reason other than the preservation or acquisition of collections."
4. According to ICOM<sup>29</sup>: "Proceeds should be applied solely to the purchase of additions to museum collections."

### S.R. Guggenheim Foundation Collection Policy

The following policy and procedures for the Deaccession and Disposition of Works of Art is taken wholly from the Guggenheim website (FOUNDATION 2012), and the ten clauses stated below are agreed upon the governance of process of deaccessioning by the board of trustee, chief curator, and executive director. The foregoing requirements must be met, a work may be deaccessioned in any of the following circumstances:

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<sup>27</sup> Ibid

<sup>28</sup> <https://www.aam-us.org/programs/ethics-standards-and-professional-practices/collections-stewardship-standards/>

<sup>29</sup> Ibid

1. the work is inconsistent with the mission of the Foundation;
2. the work has failed to retain its identity;
3. the work is redundant;
4. the work's preservation and conservation needs are beyond the capacity of the Foundation to provide;
5. to accomplish refinement of the Collection;
6. it has been established that the work is inauthentic;
7. the Foundation is repatriating the work or returning the work to its rightful owner;
8. the Foundation is returning the work to the donor, or the donor's heirs or assigns, to fulfill donor restrictions relating to the work which the Foundation is no longer able to meet;
9. the work presents a hazard to people or other Collection items; or
10. the work has been lost or stolen and has not been recovered.

### Deaccession Sales Record of Guggenheim Collection

The origins of the verb “deaccession” is coined by AAM in the 1970s. According to the database of Artprice, Guggenheim museum's earliest probable deaccession sale was held at Sotheby's London in 1964<sup>30</sup>, selling 50 works of Kandinsky out of the 170 pieces that Solomon had gifted to the museum in 1939. The latest recorded deaccessioning was also a Kandinsky occurred at Christie's auction sales New York in 2016. To avoid bias research finding of deaccession sales records of Guggenheim collection, SCIPIO is also used for the searches of comparables. SCIPIO is a database searches for past art and rare books auction sales catalogs from 25 different fine art organizations around the world. Although it is widely recognized, using SCIPIO database as a source of research has limitations in visibility into Guggenheim's deaccession history.

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<sup>30</sup> <https://www.nytimes.com/1990/03/05/arts/guggenheim-may-sell-artworks-to-pay-for-a-major-new-collection.html>

As museum deaccession sales must be consigned with an auction house in the United States. The majority of these consignments are usually planned by the two major houses – Christie's and Sotheby's. Since Christie's is a private listed company the house is not obligated to publish any past sales information online. Result searches for Christie's auction sales catalogs on SCIPIO are virtually null. So, the only house that has available public records of museum deaccession artworks listed on auction sales catalogs found on SCIPIO is Sotheby's. Ostensibly, Sotheby's was a public listed company, before the private takeover acquisition by Patrick Drahi in 2019. However, there is a time lapse of twenty-three years from 1987 to 2010. No visible Sotheby's catalogs are shown on SCIPIO's searches of museums deaccession sales. Foremost, the invention of computing data entry and the internet were not popularized until the 1990s; the research of past auction sales prices before 1990 has not been digitalized and is limited in access.

From SCIPIO, ninety-eight deaccession artworks are recorded based on Sotheby's past auction sales catalogs from 1975 to 1986 and then in 2011 to 2016, however, there is no mention of Kandinsky's work being deaccessioned in the database. This suggests the unreliable data integrity and proves that SCIPIO cannot be the sole reference when researching museum deaccession artworks. There is no exact record of when did the first deaccession sales of Guggenheim Foundation, or the total number of deaccessioned works are found externally on the public libraries or online art price databases, except this classified information can only be possibly found internally from Guggenheim holdings.

## Chapter 2: Non-Profit Financial Year Report

A recent artsy report about the U.S. art market in 2018 notes that the arts sector contributed \$763.6 Billion to U.S. Economy—more than agriculture or transportation. This U.S. government data was released by the Bureau of Economic Analysis (BEA) and the National Endowment for the Arts (NEA)<sup>31</sup>. The NEA Act of 1965, 20 U.S.C.A Statute 951-968 (West 2000) is projected to provide \$80.4 million across U.S. arts institutions. In the U.S., there are currently 35,144 museums in the U.S. and many other types of arts institutions. If we were to equally distribute this fund across these museums alone, each would receive about \$2,287.73 a year. This amount is not even enough to a monthly wage for a single full-time staff member.

By contrast, 2.3% of U.S. museums are in debt of approximately \$521 million as recorded by the National Taxonomy of Exempt Entities (NTEE). These figures<sup>32</sup> are found in the 2012 archive which outlines how these museums have higher percentages of trade debt relative to their spending in the following fiscal year. More significantly, much of the nonprofits' current debt is in the form of tax-exempt bonds. Unfortunately, as much as 20% of profitable shares have dropped in endowment value during the 2009 recession. This had led major museums to owe more bonds-related debts due to the stock market crash.

Basically, a non-profit financial year end report outlines the expenditures and a breakdown of the varying sources of revenue. This information often informs the board of trustee approval of the budget for the following year as it aids in projecting of operational funds from institutional grants, individual contributions, special events, and earned income from public patronage. Majority of non-profits in U.S. rely on major gifts as the main resource of cash contributions. Donors are eligible for tax deduction when giving a substantial amount to non-profit organizations, and this helps to promote the civil duty of philanthropy in U.S. An individual donor to any non-profit organization in New York receives an income tax deduction of up to 20% under capital gain.

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<sup>31</sup> Artsy 2018 Article on Arts sector contributed \$763.6 Billion to U.S. Economy—more than agriculture or transportation as new Data Shows

<sup>32</sup> Nonprofit Quarterly 2018 Article on the price of nonprofit debt

## FASB reporting standards & Sarbanes-Oxley Act on 990 Tax form

Specific guidelines must be adopted for a nonprofit museum outlined in the clause of 501(c)3 Non-exempt Public Charity organization. It is not subjected to pay taxes as a for-profit business would. This is stated in IRS (Schedule D Form 990) and FASB<sup>33</sup> changes Part X Accounting Standards update (ASU) 2016-14. FASB in compliance with Sarbanes-Oxley Act (SOX)<sup>34</sup> creates and defines the role of the Public Company Accounting Oversight Board, a new entity empowered to enforce standards for audits of public non-profit companies. Under SOX and FASB, it is not necessary for a non-profit organization to report its net assets on book value. Nonprofits are not supposed to generate profits. That is why they are exempt from paying taxes. The statements below is taken wholly from FASB ASC 958 two main clauses for museums as stated,

1. “Organizations that receive contributions of works of art, historical treasures, and similar assets that don't maintain collections as described in FASB ASC 958, are not required to complete Part III, but may be required to complete Schedule M.”
2. “[...] An organization that does not recognize and capitalize its collections for financial statement purposes will report its collections on the face of its statement of activities, separately from revenues, expenses, gains, losses, and assets. An organization that recognizes and capitalizes its collections for its financial statement purposes will report its collections as assets and revenues based upon its fair value measurement.”

These clauses align with Part IV on tax form 990, a check list of required share dues that requires an answer of “Yes” or “No.” Schedule M pertains to collection items held by the organization in furtherance of public service. An organization would answer “Yes” if they had not deaccessioned work that year. Any collection items sold by the organization is reflected as financial gain if the organization has deaccessioned their gifted works.

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<sup>33</sup> FASB Statement of Financial Accounting Standards No. 116 / ASC 958

<sup>34</sup> <https://trust.guidestar.org/the-sarbanes-oxley-act-and-implications-for-nonprofit-organizations>

## Reading Guggenheim 501(c)3 Non-Exempt tax form 990

| <b>Guggenheim Foundation Affiliate and Audited Consolidated Statement of Position</b> |                       |                        |                       |                       |                       |
|---|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| <b>Assets</b>   | <b>2018</b>           | <b>2017</b>            | <b>2016</b>           | <b>2015</b>           | <b>2014</b>           |
| Cash and cash equivalents   | \$ 12,435,687         | \$ 6,721,147           | \$ 13,870,354         | \$ 24,597,684         | \$ 8,225,749          |
| Cash and cash equivalents - restricted  | \$ 14,389,677         | \$ 14,761,387          | \$ 27,496,136         | \$ 27,022,668         | \$ 32,265,979         |
| Investments   | \$ 78,604,097         | \$ 84,849,130          | \$ 68,564,568         | \$ 59,148,628         | \$ 68,364,759         |
| Inventories for sale or use   | \$ 1,276,010          | \$ 1,348,084           | \$ 1,426,169          | \$ 1,385,371          | \$ 993,551            |
| Prepaid expenses and other assets   | \$ 2,328,456          | \$ 1,372,764           | \$ 1,042,448          | \$ 1,193,114          | \$ 1,370,807          |
| Property and equipment, net   | \$ 57,541,092         | \$ 62,055,174          | \$ 59,882,018         | \$ 56,965,426         | \$ 62,079,552         |
| Other assets  | \$ 288,530            | \$ 288,532             | \$ 296,149            | \$ 287,976            | \$ 287,976            |
| <b>Total Assets:</b>  | <b>\$ 166,865,567</b> | <b>\$ 171,396,218</b>  | <b>\$ 172,577,842</b> | <b>\$ 170,600,867</b> | <b>\$ 173,588,373</b> |
| <b>Liabilities and Net Assets</b>   | <b>2018</b>           | <b>2017</b>            | <b>2016</b>           | <b>2015</b>           | <b>2014</b>           |
| <i>Liabilities:</i>   |                       |                        |                       |                       |                       |
| Accounts payable and accrued expenses   | \$ 15,895,982         | \$ 15,290,201          | \$ 17,905,973         | \$ 13,234,708         | \$ 14,249,154         |
| Deferred revenue  | \$ -                  | \$ 38,453,705          | \$ 36,127,214         | \$ 40,391,219         | \$ 33,265,830         |
| Tax-exempt bond liabilities   | \$ 37,182,428         | \$ -                   | \$ -                  | \$ -                  | \$ 2,900,000          |
| Loans   | \$ 22,059,960         | \$ 22,518,577          | \$ 19,477,197         | \$ 7,090,871          | \$ 3,649,252          |
| Other liabilities   | \$ 1,595              | \$ 8,000               | \$ 2,000              | \$ 6,000              | \$ 10,000             |
| <b>Total:</b>   | <b>\$ 75,139,965</b>  | <b>\$ 76,270,483</b>   | <b>\$ 73,512,384</b>  | <b>\$ 60,722,798</b>  | <b>\$ 54,074,236</b>  |
| <i>Net Assets:</i>  |                       |                        |                       |                       |                       |
| Unrestricted  | \$ 330,840            | \$ (559,240)           | \$ 6,025,350          | \$ 15,446,115         | \$ 22,310,068         |
| Temporarily restricted  | \$ 13,034,789         | \$ 25,558,751          | \$ 30,599,874         | \$ 35,069,971         | \$ 37,529,848         |
| Permanently restricted  | \$ 78,357,955         | \$ 70,126,224          | \$ 62,440,234         | \$ 59,395,598         | \$ 59,674,221         |
| <b>Total:</b>   | <b>\$ 91,723,584</b>  | <b>\$ 95,125,735</b>   | <b>\$ 99,065,458</b>  | <b>\$ 109,911,684</b> | <b>\$ 119,514,137</b> |
| <b>Total Liabilities and Net Assets :</b>   | <b>\$ 166,863,549</b> | <b>\$ 171,396,218</b>  | <b>\$ 172,577,842</b> | <b>\$ 170,634,482</b> | <b>\$ 173,588,373</b> |
| <b>Support and Revenues</b>   | <b>2018</b>           | <b>2017</b>            | <b>2016</b>           | <b>2015</b>           | <b>2014</b>           |
| Individual, Foundations and corporate Contributions                                   | \$ 41,588,253         | \$ 23,247,345          | \$ 26,737,613         | \$ 19,518,463         | \$ 34,374,708         |
| Program Services  | \$ 27,523,844         | \$ 31,184,840          | \$ 40,169,546         | \$ 37,118,786         | \$ 42,020,404         |
| Sales of Assets contributions   | \$ 1,912,782          | \$ 1,630,192           | \$ (692,965)          | \$ 2,565,526          | \$ 1,783,861          |
| Sales of inventory contributions  | \$ 5,068,616          | \$ 2,959,388           | \$ 2,047,376          | \$ 1,936,115          | \$ 2,206,160          |
| Fundraising Events  | \$ (1,260,632)        | \$ (1,138,980)         | \$ (1,519,301)        | \$ (1,223,901)        | \$ (726,503)          |
| Royalties   | \$ 1,734,796          | \$ 1,790,059           | \$ 1,876,319          | \$ 7,809,864          | \$ 1,338,935          |
| Miscellaneous Income  | \$ 808,221            | \$ 1,110,924           | \$ 1,258,304          | \$ 2,269,400          | \$ 5,289,201          |
| Investment Income   | \$ (198,683)          | \$ 1,041,623           | \$ 738,229            | \$ 1,887,075          | \$ 2,906,061          |
| <b>Total Revenues:</b>  | <b>\$ 77,177,197</b>  | <b>\$ 61,825,391</b>   | <b>\$ 70,615,121</b>  | <b>\$ 71,881,328</b>  | <b>\$ 89,192,827</b>  |
| <b>Expenses</b>   | <b>2018</b>           | <b>2017</b>            | <b>2016</b>           | <b>2015</b>           | <b>2014</b>           |
| Salaries and wages  | \$ 25,542,909         | \$ 25,762,684          | \$ 25,677,734         | \$ 24,668,267         | \$ 24,422,597         |
| Employees' Compensations & Benefits Article 5,8-9                                     | \$ 8,276,253          | \$ 8,199,537           | \$ 8,549,907          | \$ 9,077,247          | \$ 8,780,014          |
| Fees for services (non-employees) Article 11  | \$ 7,093,162          | \$ 7,730,762           | \$ 9,681,182          | \$ 9,555,259          | \$ 10,395,505         |
| Advertising and promotion   | \$ 723,128            | \$ 1,549,570           | \$ 2,262,329          | \$ 1,750,062          | \$ 2,454,061          |
| Office expenses   | \$ 1,533,090          | \$ 1,791,192           | \$ 1,917,387          | \$ 1,959,141          | \$ 2,463,089          |
| Information technology  | \$ 788,642            | \$ 658,335             | \$ 383,888            | \$ 444,166            | \$ 340,880            |
| Royalties   | \$ 53,598             | \$ 100,145             | \$ 82,189             | \$ 84,176             | \$ 98,490             |
| Occupancy   | \$ 10,372,748         | \$ 7,809,055           | \$ 8,805,959          | \$ 7,031,730          | \$ 6,745,468          |
| Travel & conferences  | \$ 1,768,431          | \$ 2,258,340           | \$ 2,412,628          | \$ 2,997,468          | \$ 3,077,671          |
| Insurance   | \$ 505,781            | \$ 829,798             | \$ 844,323            | \$ 941,766            | \$ 1,118,276          |
| All Other Expenses  | \$ 9,685,524          | \$ 9,481,268           | \$ 12,317,233         | \$ 9,733,069          | \$ 15,217,271         |
| <b>Total Expenses:</b>  | <b>\$ 66,343,266</b>  | <b>\$ 66,170,686</b>   | <b>\$ 72,934,759</b>  | <b>\$ 68,242,351</b>  | <b>\$ 75,113,322</b>  |
| <b>Capital Expenses</b>   | <b>2018</b>           | <b>2017</b>            | <b>2016</b>           | <b>2015</b>           | <b>2014</b>           |
| Depreciation and amortization   | \$ 5,308,165          | \$ 5,109,439           | \$ 4,981,802          | \$ 5,026,037          | \$ 5,092,255          |
| Interest  | \$ 955,727            | \$ 909,627             | \$ 368,222            | \$ 156,780            | \$ 204,915            |
| Taxes   | \$ 1,947,257          | \$ 1,820,736           | \$ 1,787,596          | \$ 1,808,708          | \$ 1,658,020          |
| <b>Total Capital Expenses:</b>  | <b>\$ 8,211,149</b>   | <b>\$ 7,839,802</b>    | <b>\$ 7,137,620</b>   | <b>\$ 6,991,525</b>   | <b>\$ 6,955,190</b>   |
| <b>Total Expenses:</b>  | <b>\$ 74,554,415</b>  | <b>\$ 74,010,488</b>   | <b>\$ 80,072,379</b>  | <b>\$ 75,233,876</b>  | <b>\$ 82,068,512</b>  |
| <b>Net Income:</b>  | <b>\$ 2,622,782</b>   | <b>\$ (12,185,097)</b> | <b>\$ (9,457,258)</b> | <b>\$ (3,352,548)</b> | <b>\$ 7,124,315</b>   |

Table 1 - Guggenheim Statement of Position

| <b>Guggenheim Foundation Financial Statement Analysis End of FYR 2014 to 2018 (USD \$)</b> |                |                 |                |                |                |
|--|----------------|-----------------|----------------|----------------|----------------|
|  | <b>2018</b>    | <b>2017</b>     | <b>2016</b>    | <b>2015</b>    | <b>2014</b>    |
| <b>Profitability and Valuation</b>   |                |                 |                |                |                |
| Revenues   | \$ 77,177,197  | \$ 61,825,391   | \$ 70,615,121  | \$ 71,881,328  | \$ 89,192,827  |
| Revenue Growth Rate  | 25%            | -12%            | -2%            | -19%           | 14%            |
| Sales Revenue  | \$ 35,787,627  | \$ 37,536,423   | \$ 43,139,279  | \$ 50,475,790  | \$ 51,912,058  |
| Cost of Goods sold   | \$ 12,465,832  | \$ 14,918,142   | \$ 17,583,926  | \$ 17,732,038  | \$ 19,947,972  |
| Gross Profit   | \$ 23,321,795  | \$ 22,618,281   | \$ 25,555,353  | \$ 32,743,752  | \$ 31,964,086  |
| Gross Margin   | 30%            | 37%             | 36%            | 46%            | 36%            |
| Net Income   | \$ 2,622,782   | \$ (12,185,097) | \$ (9,457,258) | \$ (3,352,548) | \$ 7,124,315   |
| Net Income Growth  | -122%          | 29%             | 182.09%        | -147.06%       | 207.25%        |
| Net Profit Margin  | 3%             | -20%            | -13.39%        | -4.66%         | 7.99%          |
| Book Value / Equity  | \$ 91,725,602  | \$ 95,125,735   | \$ 99,065,458  | \$ 109,878,069 | \$ 119,514,137 |
| Return on Equity (ROE)   | 3%             | -13%            | -9.55%         | -3.05%         | 5.96%          |
| EBITDA   | \$ 10,833,931  | \$ (4,345,295)  | \$ (2,319,638) | \$ 3,638,977   | \$ 14,079,505  |
| EBITDA Ratio   | 0.30           | (0.12)          | (0.05)         | 0.07           | 0.27           |
|  | <b>2018</b>    | <b>2017</b>     | <b>2016</b>    | <b>2015</b>    | <b>2014</b>    |
| <b>Financial Position</b>  |                |                 |                |                |                |
| Current Assets   | \$ 30,718,360  | \$ 24,491,914   | \$ 44,131,256  | \$ 54,486,813  | \$ 43,144,062  |
| Long-term Assets   | \$ 136,147,207 | \$ 146,904,304  | \$ 128,446,586 | \$ 116,114,054 | \$ 130,444,311 |
| Total Assets   | \$ 166,865,567 | \$ 171,396,218  | \$ 172,577,842 | \$ 170,600,867 | \$ 173,588,373 |
| Current Liabilities  | \$ 15,897,577  | \$ 53,751,906   | \$ 54,035,187  | \$ 53,631,927  | \$ 47,524,984  |
| Long-term Liabilities  | \$ 59,242,388  | \$ 22,518,577   | \$ 19,477,197  | \$ 7,090,871   | \$ 6,549,252   |
| Total Liabilities  | \$ 75,139,965  | \$ 76,270,483   | \$ 73,512,384  | \$ 60,722,798  | \$ 54,074,236  |
| Total Debt   | \$ -           | \$ 12,185,097   | \$ 9,457,258   | \$ 3,352,548   | \$ -           |
| Current Ratio  | 1.93           | 0.46            | 0.82           | 1.02           | 0.91           |
| Debt-to-Equity (D/E) Ratio   | 0.00           | 0.13            | 0.10           | 0.03           | 0.00           |
| Debt-to-Equity (D/E) Ratio (2)   | 0.82           | 0.80            | 0.74           | 0.55           | 0.45           |

Table 2 - Analysis of FYR 2014-18

In this analysis, we will be reading Guggenheim Foundation Statement of Financial Positions from 2014 to 2018. The net income reveals whether the non-profit is operating either in deficit or in surplus as shown in Table 1. Fundraising events may not be beneficiary in Guggenheim's context. In 990s' Part II and XIII of supplemental information states, "In accordance with industry practices, art objects purchased, donated and bequeathed are included in permanently restricted net assets at a value of "\$1." Contributions for the purchase of collection items, net assets released from restrictions to purchase collection items, the cost of all collection items purchased and the proceeds from deaccessioned and non-accessioned art are reported as *changes in net assets* related to collection items purchased and sold in the statement of activities."

However, it is not certain whether recording of such values of deaccession is added to the permanent restricted net assets within the tax form. In Schedule M, Part I, Line 33, checked “Yes” for “If the organization didn't report an amount in column (c) for a type of property for which column (a) is checked, describe in Part II.” This means there has been selling of artworks. Throughout five years of 990s, in Part VIII of revenues under 11a of Miscellaneous Income, it records “proceeds from sales of art,” the values recorded ranges from \$10,000 to \$4 million. In Part IX of functional expenses under 24a of other expenses, it records “art purchases,” figures recorded between \$4 to \$7 million.

For the year ended December 31, 2018 in the overall FYR analysis, Guggenheim reported net income of \$2.6 million, net assets of \$92 million, monthly expenses of \$5.5 million, and 16 months 7 days for operating months. As compared to net income of -\$12.2 million, net assets \$95 million, monthly expenses \$5.2 million, and lasting with 18 months 2 days for operating in the prior year 2017. Driven in part by 25% growth in Revenue Growth Rate to EBITDA of \$10.3 million, the organization’s consolidated revenue increased by 3% to reach \$77.2 million in 2018. This growth contributed to a 20% improvement in Operating Income to \$15.3 million, and a -14% decrement in Adjusted Operating Income to -\$8.8 million when compared to the prior year. From the FYR analysis in table 2, it is obvious that Guggenheim is facing deficits for three years in a row, with an average revenue growth rate of 1.2%, EBITDA ratio of 0.09, fundraising efficiency ratio is -1.32, and leftover liquidity months of 0.06. A low ratio below 0.1 represents the operational standing based on costs management can control is debt-ridden.

After reviewing the profitability and valuation of Guggenheim, the non-profit’s reliance on building its revenue from fundraising seems inadequate. In lieu of a sustainable earned income from memberships, admission, conferences, bar restaurant and merchandise is also deemed insufficient and partially proven by the debacle of underpaid non-executive level museum staff. Due to this shortcoming, the museum may have considered to deaccessioning more artworks from its collections to continue purchases of pertinent objects to its emerging contemporary art collection. Nonetheless, it will be ideally to push forward to seek out larger donations in the future. Assigning a FMV of its collections in



990s' Part II and XIII of supplemental information for Schedule M, could strengthen its brand instead of placing a redundant value of \$1, which in turn, FMV of a collection is not unnecessary to be reflected in the permanent restricted net assets under FASB ASC 958 clause 2. With greater transparency, critical financial information developed in the 990 form is necessary, in order to stay abreast of the organization's financial health.

## Chapter 3: Valuation of Collection

(AASLH 2003) The sole act of placing a cash value on a collection does not necessarily capitalize it. Appraising a collection can be used for insurance purposes, for instance, establishes a value in case of damage or loss; it does not by itself capitalize the collection. Appraisal in itself offers many unique challenges as we have learnt from the deaccession case studies. Some items may have historical value that is exceeding the worth beyond of any monetary value. The value of other items may fluctuate widely in accord with the art market. In addition, if an item literally cannot be replaced, how does an institution identify a replacement value for a deaccessioned artwork?

In this valuation exercise, we will find out the appraisal value of the entire Guggenheim Founding Collection in today's face value or fair market value (FMV). FMV is the price that a fixed property would sell for on the open market. However, due to the scale of the collection, not every single artwork from the collection is on view or exhibiting in the museum, thus, a real time condition report of an artwork is considered void in this study. A blockage discount with a hypothetical damage and loss in value percentage has been included in the fair market value. It should also be noted that all the examples quoted in this report are included in the catalogue raisonné and are treated as comparable with regard to provenance as well as exhibition history. The next paragraphs are summarized analysis of the rationales to the research methods, valuation workings, formulas and details to why they are being calculated in the excel spreadsheets. Firstly, we have to find the collection's artists and their artworks available on the Guggenheim website. In table 3 shows the list of 35 artists and their total number of 182 works extracted according to Guggenheim Founding Collection website<sup>35</sup>.

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<sup>35</sup> [https://www.guggenheim.org/artwork/special\\_collection/solomon-r-guggenheim-founding-collection](https://www.guggenheim.org/artwork/special_collection/solomon-r-guggenheim-founding-collection)

| No. | Artist   | Number of works |
|-----|--|-----------------|
| 1   | Rudolf Bauer b. 1889 - d. 1953                       | 7               |
| 2   | Harry Bertoia b. 1915 - d. 1978                      | 3               |
| 3   | Pierre Bonnard b. 1867 - d. 1947                     | 1               |
| 4   | Alexander Calder b. 1898 - d. 1976                   | 1               |
| 5   | Marc Chagall b. 1887 - d. 1985                       | 10              |
| 6   | Robert Delaunay b. 1885 - d. 1941                    | 8               |
| 7   | Claire Falkenstein b. 1908 - d. 1997                 | 1               |
| 8   | Lyonel Feininger b. 1871 - d. 1956                   | 2               |
| 9   | John Ferren b. 1905 - d. 1970                        | 2               |
| 10  | Naum Gabo b. 1890 - d. 1977                          | 4               |
| 11  | Albert Gleizes b. 1881 - d. 1953                     | 11              |
| 12  | Juan Gris b. 1887 - d. 1927                          | 1               |
| 13  | Vasily Kandinsky b. 1866 - d. 1944                   | 44              |
| 14  | Paul Klee b. 1879 - d. 1940                          | 5               |
| 15  | Fernand Léger b. 1881 - d. 1955                      | 9               |
| 16  | Franz Marc b. 1880 - d. 1916                         | 17              |
| 17  | Jean Metzinger b. 1883 - d. 1956                     | 2               |
| 18  | Wallace Mitchell b. 1911 - d. 1977                   | 4               |
| 19  | Amedeo Modigliani b. 1884 - d. 1920                  | 2               |
| 20  | László Moholy-Nagy b. 1895 - d. 1946                 | 15              |
| 21  | Piet Mondrian b. 1872 - d. 1944                      | 3               |
| 22  | Ben Nicholson b. 1894 - d. 1982                      | 1               |
| 23  | Gordon Onslow Ford b. 1912 - d. 2003                 | 4               |
| 24  | Irene Rice Pereira b. 1902 - d. 1971                 | 1               |
| 25  | Pablo Picasso b. 1881 - d. 1973                      | 4               |
| 26  | Enrico Prampolini b. 1894 - d. 1956                  | 1               |
| 27  | Hilla Rebay b. 1890 - d. 1967                        | 4               |
| 28  | Henri Rousseau b. 1844 - d. 1910                     | 1               |
| 29  | Rolph Scarlett b. 1889 - d. 1984                     | 1               |
| 30  | Georges Seurat b. 1859 - d. 1891                     | 5               |
| 31  | Gino Severini b. 1883 - d. 1966                      | 1               |
| 32  | Alice Trumbull Mason b. 1904 - d. 1971               | 1               |
| 33  | Georges Valmier b. 1885 - d. 1937                    | 1               |
| 34  | Maria Helena Vieira da Silva<br>b. 1908 - d. 1992    | 1               |
| 35  | Friedrich Vordemberge-Gildewart<br>b. 1899 - d. 1962 | 4               |
|     |  | 182             |

Table 3 - list of 35 artists

## Finding Comparables from Art Indices

The construction of an art index is hampered by unique factors. It indicates that art only sells occasionally and no two works of art are identical. Even though there are only a small number of bidders per work, the art includes a private value component (Roberston 2016). Two estimation methods mentioned by (Fabian Bocart 2017) that are commonly used to construct indices: repeat-sales regression (RSR) and the hedonic regression (HR). RSR uses prices of individual collectible objects traded at two distinct moments in time. If the characteristics of an object do not change, the heterogeneity issue is bypassed. HR method is used to regress prices on various attributes of collectible objects by dimensions, artist, subject matter, and it uses time dummies in the regression to obtain “characteristic-free” prices to compute a price index (Fabian Bocart 2017). A selection nearest comparables to the 35 artists in Guggenheim Founding Collection were identified and their recent price history was reviewed using primarily online auction price databases such as: Artprice, Artnet, Sotheby's, Christie's, Phillips, Bonhams, Dorotheum, Artsy, Artspace, liveauctioneers, Heritage auction, Brunn Rasmussen, paddle8, Barnebys, SCIPPIO and Google. Particularly, using Artprice's<sup>36</sup> database platform. It claims that it has the most comprehensive database of over 10,000 indices and price levels for artists based on repeated sales (RSR) and hedonic price regressions (HR) and calculated from unique databases of more than 30 million auction results.

During the research, 182 Guggenheim's collected artists' works are scarce in the top tier of the art auction price index. This is because these paintings are one of a kind and/or not a part of a series and some were lost at war. The low level of auction activity provides a rather limited number of comparables for valuation purposes. Rarity poses a great challenge to this valuation report as appraisers could only rely on the most recent highest priced comparables by hedonic regression to collate its estimated value and last hammer price. This is further explained in the chapter 'The Art of Pricing' in Talking Prices (Velthuis 2005), “If an artist does have a pricing history, whether on the secondary market

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<sup>36</sup> Price levels and indices of artists - <https://www.artprice.com/indexes/artinvestment>

or in another gallery, the existing price level is adopted and extrapolated. This means that price setting on the art market is path-dependent: the current price level is always based on the past level. This path-dependent nature has empirical basis in Frey and Pommerehne's economic study of the art market, which shows that past prices are a very strong predictor of future prices."

One would only gain further insight into the significance of these factors by comparing actual prices achieved against pre-sale estimates. However, the actual price percentage of an artist's overall performance cannot not be fully dependent on Artprice's market analysis algorithm on the artist's highest price status-quo using an array of moving average percentage, because the results of their analyses are inconsistent throughout their database. For instance, Artprice wrote a one-line investment insight statement<sup>37</sup> under its key figures and market trend saying, "\$100 invested in a work by Marc CHAGALL in 2000 would be worth an average of \$212 (+ 112%) in December 2019." In reality, the result of an average moving percentage should be 53% for 19 years.

### Logic, Terms and Conditions of FMV

| Valuation Logic, Terms & Conditions  |  |   |      |         |               |
|--|--|---|------|---------|---------------|
| <p>FMV is calculated by the most logical comparable found with its last auction sale price and year. The nearest comparable is identified and measured by the closest either to the likeness, by age, size medium, finish surface, subject matter or artistic style.</p>           | <p>Artprice: \$100 invested in a work by Marc CHAGALL in 2000 would be worth an average of \$212 (+ 112%) in December 2019<br/>                     Ranking in 2018- no. 35, in 2019 – no. 25 jump ten positions<br/>                     Price evolution 2018: 41.7%<br/>                     Number of lots sold in 2018: 1251<br/>                     Turnover in 2018: \$63,681,688<br/>                     % of bought-in lots (prints excluded) in 2018: 33.7%</p> | <p>Mean of Artprice's investment insight, threshold max. 19 years inflation. 53% for Yr2000 to 2019. 3% increment per year.</p> | 53%  | 3%      |               |
| <p>Blockage Discount (2%) is including damage &amp; loss value (1%), taken for every 10 years is 3%. If age 107 years, is 32.1% discount. In order to calculate the relative Standard Deviation, min.3 comparables are used to compare the average of the recent auction data.</p> | <p>Remarks: Marc Chagall only painted "I and the Village" oil on canvas in 1911 gifted to MoMa, and the only watercolor on paper as gift to Hilla Rebay in 1939. It is considered as priceless and monumental art piece, as Jewish heritage before the World wars.</p>   | <p>Mean of Relative Standard Deviation, threshold (Yr2019 - Oldest auction Yr record) of inflation</p>                          | 68%  |         |               |
|  |  | <p>Relative Std.D</p>   | 68%  | Mean    | Standard Dev. |
|  |  | <p>Moving Avg. Per Yr</p>   | 2.1% | \$ 7.12 | \$ 4.85       |

Table 4 - Valuation Logic, Terms & Conditions for finding an artist's artwork FMV

The logic, terms and conditions of FMV valuation on Table 4 is predetermined by three basic requirements of the found comparables portraying acute similarity to the

<sup>37</sup> Text taken from <https://www.artprice.com/artist/5240/marc-chagall/index>

Guggenheim's collected artwork: [1] age and total size in cm<sup>2</sup>, [2] pedigree by means of likeness to its aesthetics; subject matter, artistic style in application, method or construction, choice of medium and finish surface, and [3] the value of standard deviation must not be negative or zero. In conformity with all of the above mentioned [1,2,3] prerequisites, a Fair Market Value (FMV) then can be calculated adequately and measured by the most logical comparable with its latest auction hammer price and date of sale. Influencing factors (Rush 1961) that concerns the [1, 2] prerequisites' price of a particular work of art: The artist's full name, title, year of birth, locale and whether it is typical of the artist and painted in the most desired period of his career. Quality in terms of the artist's other paintings and characteristics of the painting's subject and size, and condition of collection. (Findlay 2012) The size of a work can also affect its value. Other factors being equal a larger work by an artist will usually have higher value than a smaller work. This is most evidently seen at solo shows of primary market work. The size of work is central to its meaning. Provenance in record of collections, exhibitions and other background. Signature or artist's mark on the art object. Who offers it for sale? Where and when is it offered for sale? Who attends the sale?

Why use the formulation of standard deviation [3], and relative standard deviation (RSD)? Standard deviation<sup>38</sup> is a number used to tell how measurements for a group are spread out from the average (mean) or expected value regardless of a time scale. A low standard deviation means that most of the numbers are close to the average, which means a lower generated percentage. A high standard deviation means that the numbers are more spread out, which means a higher generated percentage. Reasons why rarity in similar sold artworks are not found – either there is no repeated sale, or have never been sold on the secondary market, or the artist only made a handful of works or limited works that recycled in auction over short term period. An exactly matched result in rarity of works of art is unlikely as it would be rare to find a red diamond in the world.

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<sup>38</sup> [https://simple.wikipedia.org/wiki/Standard\\_deviation](https://simple.wikipedia.org/wiki/Standard_deviation)

Relying on an art market index to generate the gradual moving average percentage for a museum artwork would lead to gaining data out of context. Because an index (Fabian Bocart 2017) requires the repeated sales methodology (RSR), each artwork must have been traded at least twice over a sample period. We also cannot predetermine (Findlay 2012) the same market price index for impressionist, modern and contemporary art markets in next few decades, considering there is no structured product<sup>39</sup> with a buying price – futures contract, warrant, option, or convertible security – for the regulated stock market exchanges i.e. Nasdaq, Dow, S&P 500. Financial formulas that calculate a stock price cannot be compared with figuring out a FMV price for art. For these reasons, the only finance valuation method in close proximity to the physiognomy of art would be property. Property valuation does comparable calculation by price per square foot, comparing from recent transactions of similar units in a building or same location, market rates, condition, price adjustment after taxes, insurance, repairs, and premium.

Using the formulation of standard deviation when calculating a museum artwork by total size as the price denominator per cm<sup>2</sup> of a year is similar to identifying a weighted average value price (WACC) from the methodology of property valuation. It presents a definite value (expected value) collating from a substantial range of data on an irregular time scale. A Weighted Average Cost of Capital<sup>40</sup> (WACC) is the rate that a company is expected to pay on average to all its security holders to finance its assets. The WACC is commonly referred to as the firm's cost of capital without an expiration date. In order, to find the Relative Standard Deviation (RSD) percentage of prerequisite [3], a minimum three comparable of sold with signature artworks are used to compare the average of the recent auction sale data, and the end value of standard deviation must not be negative or zero. Standard deviation cannot be negative<sup>41</sup> because it is a measure of dispersion and square rooted variance. Variance is calculated by summing all the squared distances from the mean and dividing them by number of all cases. If one data entry in calculating variance is negative, it will always become positive when squared. And finally, when we

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<sup>39</sup> CFA level 2 - investment management and portfolio concepts

<sup>40</sup> [https://en.wikipedia.org/wiki/Weighted\\_average\\_cost\\_of\\_capital](https://en.wikipedia.org/wiki/Weighted_average_cost_of_capital)

<sup>41</sup> <https://www.quora.com/Can-standard-deviation-be-negative-Why-or-why-not>

square root the variance to get standard deviation, it must be a positive number because square root of positive number is always a positive number. To understand how to calculate the average, standard deviation, and relative standard deviation, see the below Equation 1 explanation:



## Average, Standard Deviation and Relative Standard Deviation

How will your data compare with other people's data? Let's find out. We will do this by pulling together everybody's data, then calculating the *average*, *standard deviation*, and *relative standard deviation*. You can then compare your data with the average of everybody's data.

The **average** result,  $\bar{x}$ , is calculated by summing the individual results and dividing this sum by the number (n) of individual values:

$$\bar{x} = \frac{x_1 + x_2 + x_3 + x_4 + \dots}{n}$$

The **standard deviation** is a measure of how precise the average is, that is, how well the individual numbers agree with each other. It is a measure of a type of error called **random error** - the kind of error people can't control very well. It is calculated as follows:

$$\text{standard deviation, } S = \sqrt{\frac{(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + (x_3 - \bar{x})^2 + \dots}{n - 1}}$$

The relative standard deviation (RSD) is often times more convenient. It is expressed in percent and is obtained by multiplying the standard deviation by 100 and dividing this product by the average.

$$\text{relative standard deviation, RSD} = 100S/\bar{x}$$

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**Example:** Here are 4 measurements: 51.3, 55.6, 49.9 and 52.0. Calculate the average, standard deviation, and relative standard deviation.

$$\text{average, } \bar{x} = \frac{51.3 + 55.6 + 49.9 + 52.0}{4} = \frac{208.8}{4} = 52.2$$

$$\begin{aligned} \text{standard deviation, } S &= \sqrt{\frac{(51.3 - 52.2)^2 + (55.6 - 52.2)^2 + (49.9 - 52.2)^2 + (52.0 - 52.2)^2}{4 - 1}} \\ &= \sqrt{\frac{(-0.9)^2 + (3.4)^2 + (-2.3)^2 + (-0.2)^2}{3}} \\ &= \sqrt{\frac{0.81 + 11.56 + 5.29 + 0.04}{3}} \\ &= \sqrt{5.9} \\ &= 2.4 \end{aligned}$$

$$\text{relative standard deviation, RSD} = 100S/\bar{x} = \frac{2.4}{52.2} \times 100 = 4.6\%$$

Our final result for this example can be written as  $52.2 \pm 2.4$  or  $52.2 \pm 4.6\%$

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A blockage discount is applied for appraising art for tax purposes, as the IRS code allows an income tax deduction up to the full fair market value of certain charitable gifts of tangible property. A blockage discount is necessary to be added in a valuation of such scale as a museum collection. The determination of an appropriate level of blockage discount (Barth 2013) is usually applied to a large group of similar items. In this case, the items are paintings, sculptural works and prints. The two approaches frequently used by personal property appraisers to account for blockage are the “percentage blockage discount approach” and the “discounted present value of future earnings approach.” (Barth 2013) A typical implied percent blockage discount ranges between 31% to 46% for periods between five to ten years. These constrains are placed to reflect the risk factors that could incurred in the event that the forecast values indicate appreciation or depreciation in the future value of works.

Although, Guggenheim collection is pristine in its provenance, we must take into consideration an assessment of damages that lead to loss in value. The effect of even minor damage of western paintings, drawings and prints for the period of Modern and Contemporary could devalue the price by a discount rate of 50% to 10% per artwork (Cardile 2013). For this valuation exercise, I attempt to use the most common and relatively simpler “percentage blockage discount approach.” Procuring a hypothetical blockage discount of 2% is included with the hypothetical damage and loss value of 1%. Both percentages are designed pertaining to every ten years of the artwork’s age, which sums up to 3%. So, if age of painting is 107 years, it will be calculated for a total of 32.1% discount off the gross value of the Guggenheim artwork.

Equation 2 - blockage discount of 3%

| Marc Chagall, b. 1887, Vitebsk, Russia; d. 1985, Saint-Paul-de-Vence, France |                                       |                        |                                      |  |     |               |                  |                   |             |
|--|---------------------------------------|------------------------|--------------------------------------|--|-----|---------------|------------------|-------------------|-------------|
| Date   | Title                                 | Medium                 | Dimension                            | Provenance   | Age | Total Size cm | 2019 Gross Value | Blockage Discount | FMV Price   |
| 1912   | The Soldier Drinks ( Le soldat boit ) | Oil on canvas painting | 43 x 37 1/4 inches (109.2 x 94.6 cm) | Solomon R. Guggenheim Museum, New York, Solomon R. Guggenheim Founding Collection, By gift | 107 | 10330         | \$8,779,832.72   | =H3*((F3/10)*3%)  | \$5,961,504 |

$$\text{Gross Value} \times (\text{Age}/10\text{years}) \times 3\% = \text{Blockage Discount \$ Value}$$

Steps to find FMV of a Guggenheim Artwork

After determining on the right comparable, the excel data for each individual artist is compiled by the creation year of a singular artwork and its comparable biodata from the oldest produced artwork to the youngest artwork. This is shown on Table 5.











| Marc Chagall, b. 1887, Vitebsk, Russia; d. 1985, Saint-Paul-de-Vence, France |   |                               |  |  |     |                |   |   |   |     |              |                     |                            |
|--|---|-------------------------------|--|--|-----|----------------|---|---|---|-----|--------------|---------------------|----------------------------|
| Date   | Title   | Medium                        | Dimension                                | Provenance   | Age | Total Size cm. | Pictorial   | Comparable  | Nearest Comparable  | Age | Hammer Price | Year of Sale        | Total Size cm <sup>2</sup> |
| 1912   | The Soldier Drinks ( Le soldat boit )             | Oil on canvas painting        | 43 x 37 1/4 inches (109.2 x 94.6 cm)     | Solomon R. Guggenheim Museum, New York, Solomon R. Guggenheim Founding Collection, By gift | 107 | 10330          |  |  | Le buveur saoul c.1912 oil/canvas 83.5 by 114cm lot#18  | 107 | \$ 5,000,000 | Christie's US, 1990 | 9519                       |
| 1913   | Paris through the Window ( Paris par la fenêtre ) | Oil on canvas painting        | 53 9/16 x 55 7/8 inches (136 x 141.9 cm) | Solomon R. Guggenheim Museum, New York, Solomon R. Guggenheim Founding Collection, By gift | 106 | 19298          |  |  | Les mariés de la tour Eiffel c.1928 oil/canvas 88.9 by 116.6cm lot#24                         | 91  | \$ 8,865,380 | Christie's UK, 2016 | 10366                      |
| 1913   | The Flying Carriage ( La calèche volante )        | Oil on canvas painting        | 42 x 47 1/4 inches (106.7 x 120.1 cm)    | Solomon R. Guggenheim Museum, New York, Solomon R. Guggenheim Founding Collection, By gift | 106 | 12815          |  |  | The Flying Carriage (La calèche volante) c.1925 oil/canvas 51 by 61cm lot#2                   | 94  | \$ 2,399,263 | Sotheby's UK, 2019  | 3111                       |
| 1914   | Quarrel   | Gouache and graphite on paper | 11 1/4 x 9 1/2 inches (28.5 x 24.1 cm)   | Solomon R. Guggenheim Museum, New York, Solomon R. Guggenheim Founding Collection, By gift | 105 | 687            |  |  | Village Russes au porteur de déua, c.1912 Gouache and graphite on paper, 22 by 27.9cm lot#444 | 107 | \$ 164,680   | Sotheby's UK, 1987  | 614                        |

Table 5 – Sample of Artist Data Table

Assigning the monetary value to any work of art is a complex process, unlike financial valuation models which are straightforward as long as it is balanced on the books. Each work of art has unique creation and physical qualities. Additionally, its past sale records also acquiesced in unique circumstances (McNully 2006). The size and age of a work can also affect its value. A larger work by an artist will usually have higher value than a smaller work. This is most evidently seen at solo shows of primary market work. The size of work is central.

On table 5, a sample of Artist Data Table records the range of data entries – date, title, medium, dimension, provenance, age, total area size, to pictorial of artwork – are applied closely akin to the comparable artwork except for its hammer price and year of sale. It also provides clarity on the found comparable artworks portraying acute similarity to the three requirements [1,2,3] mentioned in the logic, terms and conditions of FMV valuation from Table 4. Taking into consideration all the factors discussed above, I have to re-emphasis that [1] age and total area size in cm<sup>2</sup>, due to the information from [1] is very

crucial as the resultant of finding the gross value of a Guggenheim artwork before a 3% blockage discount. Hence, the mean, standard deviation and relative standard deviation can be calculated by the range of data processed from the column [SqCm2/yr as of Sale]. This is illustrated on Equation 3 where the comparable artworks' hammer price is divided by the total area size cm<sup>2</sup> then divided by its age to find the price denominator per cm<sup>2</sup> of a year – i.e. \$/-per cm<sup>2</sup> /yr.

| Pictorial   | Comparable  | Nearest Comparable   | Age | Hammer Price | Year of Sale           | Total Size cm <sup>2</sup> | SqCm/yr as of Sale | Add Mov. Avg% |
|---|---|--|-----|--------------|------------------------|----------------------------|--------------------|---------------|
|  |  | Le buveur saoul c.1912<br>oil/canvas 83.5 by<br>114cm lot#18 | 107 | \$ 5,000,000 | Christie's US,<br>1990 | 9519                       | =(P3/R3)/O3        | \$ 7.94       |

Equation 3 – Calculating the price denominator per cm<sup>2</sup> of a year – i.e. \$/-per cm<sup>2</sup> /year as of sale

$$\text{Comp's Hammer price} / \text{total area size cm}^2 / \text{Age} = \text{Price } \$\text{-per cm}^2 / \text{year as of Sale}$$

After the Price \$/-per cm<sup>2</sup> /yr as of Sale figures are being found, the range of price figures are subsequently used to evaluate the mean and standard deviation. With the result of Relative Standard Deviation percentage calculated, its threshold of inflation is divided by the number of years from the difference of (Year 2019 minus the earliest recorded auction Year of Sale) in order to find out the moving average percentage of an auction year. The mean, standard deviation, relative standard deviation (RSD) percentage, and moving average percentage per auction year, taken from Alexander Calder's spreadsheet of a minimum of three comparables data is presented in the following illustrations:

| Sale            | Total Size cm <sup>2</sup> | SqCm/yr as of Sale | Adc |
|-----------------|----------------------------|--------------------|-----|
| JS 2016         | 129732                     | \$ 0.72            | \$  |
| JS 2019         | 546175                     | \$ 0.05            | \$  |
| JS 2019         | 156692                     | \$ 0.18            | \$  |
| 3 Mean          |                            | =AVERAGE(S3:S5)    |     |
| Standard Dev.   | \$                         | 0.36               |     |
| Relative Std.D  |                            | 112%               |     |
| Moving Avg. Per |                            | 37%                |     |

Equation 4 – Mean of Price \$/ -per cm<sup>2</sup> /yr as of Sale

| Sale            | Total Size cm <sup>2</sup> | SqCm/yr as of Sale | Add |
|-----------------|----------------------------|--------------------|-----|
| US 2016         | 129732                     | \$ 0.72            | \$  |
| US 2019         | 546175                     | \$ 0.05            | \$  |
| US 2019         | 156692                     | \$ 0.18            | \$  |
| 3 Mean          |                            | \$ 0.32            |     |
| Standard Dev.   |                            | =STDEV.S(S3:S5)    |     |
| Relative Std.D  |                            | 112%               |     |
| Moving Avg. Per |                            | 37%                |     |

Equation 5 - Standard Deviation of Price \$/ -per cm<sup>2</sup> /yr as of Sale

| S 2019          | Total Size cm <sup>2</sup> | SqCm/yr as of Sale | Adc |
|-----------------|----------------------------|--------------------|-----|
| 3 Mean          | 156692                     | \$ 0.18            | \$  |
| Standard Dev.   |                            | \$ 0.32            |     |
| Relative Std.D  |                            | =S7/S6             |     |
| Moving Avg. Per |                            | 37%                |     |

Equation 6 - Relative Standard Deviation %: Mean / Std.d

| .4 cm                              | 63 \$ | 1,800,000 | Christie's US 2019 | 156692 | \$     | 0.18 |
|------------------------------------|-------|-----------|--------------------|--------|--------|------|
| Yr 2019 - Oldest auction Yr record |       |           | 3 Mean             |        | \$     | 0.32 |
|                                    |       |           | Standard Dev.      |        | \$     | 0.36 |
|                                    |       |           | Relative Std.D     |        |        | 112% |
|                                    |       |           | Moving Avg. Per    |        | =S8/Q6 |      |

Equation 7 - Moving Average % Per auction year: RSD / difference of year of auction sale (i.e. this year 2019- sold at Sotheby's US 2016, is 3 years difference)

The moving average % per auction year is used as a fixed price percentage indicator to calculate the present inflated value of Price \$/ -per cm<sup>2</sup> /year as of Sale as of the current year of 2019. For example, if Alexander Calder's Mobile with Four Spots c.1941 comparable artwork titled *Untitled c.1942* was sold in year 2016 at \$0.72 per cm<sup>2</sup>/ year from a hammered price of \$7.2 million in the past three years, what will be the present price per cm<sup>2</sup> of a year for the Year 2019? From Equation 4, we know that the mean value is \$0.32, and from Equation 5, the standard deviation value is \$0.36. Only with these two values could suffice the percentage of relative standard deviation (RSD) that is computed to 112% on excel as illustrated in Equation 6.

|                 | Total Size cm <sup>2</sup> | SqCm/yr as of Sale | Add Mov. Avg.              | 2019 |
|-----------------|----------------------------|--------------------|----------------------------|------|
| 116             | 129732                     | \$ 0.72            | $= (S3 * (\$S9 * 3)) + S3$ | D    |
| 119             | 546175                     | \$ 0.05            | \$ 0.05                    |      |
| 19              | 156692                     | \$ 0.18            | \$ 0.18                    |      |
| 3 Mean          |                            | \$ 0.32            |                            |      |
| Standard Dev.   |                            | \$ 0.36            |                            |      |
| Relative Std.D  |                            | 112%               |                            |      |
| Moving Avg. Per |                            | 37.5%              |                            |      |




  

|                 | Total Size cm <sup>2</sup> | SqCm/yr as of Sale | Add Mov. Avg.              | 2019 |
|-----------------|----------------------------|--------------------|----------------------------|------|
| 116             | 129732                     | \$ 0.72            | \$ 1.53                    | D    |
| 119             | 546175                     | \$ 0.05            | $= (S4 * (\$S9 * 0)) + S4$ |      |
| 19              | 156692                     | \$ 0.18            | \$ 0.18                    |      |
| 3 Mean          |                            | \$ 0.32            |                            |      |
| Standard Dev.   |                            | \$ 0.36            |                            |      |
| Relative Std.D  |                            | 112%               |                            |      |
| Moving Avg. Per |                            | 37.5%              |                            |      |

Equation 8 – calculation of gradual moving average percentage % for every one year moving forward

$$(\text{SqCm/yr as of Sale} \times 37.5\% \times \text{difference in year of auction sale}) + \text{SqCm/yr as of Sale} = \text{Present value of price } \$/\text{-per cm}^2 \text{ /year as of Sale as of the current year in 2019.}$$

The Moving Average % Per auction year is calculated by RSD / difference of year of auction sale (i.e. this year 2019 - sold at Sotheby's US 2016, is 3 years difference), we can predict a gradual moving average percentage of 37% for every one year moving forward. Therefore, the price per cm<sup>2</sup> of a year for Alexander Calder's *Untitled c.1942* is \$1.53/-per cm<sup>2</sup> /year as of Sale in the Year 2019, workings as shown in the below of Equation 8. A terminal value of zero will occur when a comparable artwork's year of sale is dated in this present year 2019 of valuation.

| Alexander Calder, b. 1898, Lawnton, Pennsylvania; d. 1976, New York |                        |  |  |     |                            |                  |                   |                |   |                    |                   |       |
|---|------------------------|--|--|-----|----------------------------|------------------|-------------------|----------------|---|--------------------|-------------------|-------|
| Date  | Title                  | Medium Type  | Dimension                                      | Age | Total Size cm <sup>2</sup> | 2019 Gross Value | Blockage Discount | FMV Price      | Total Size cm <sup>2</sup>  | SqCm/yr as of Sale | Add Mov. Avg 2019 |       |
| 1941  | Mobile with Four Spots | Wood, painted sheet metal, wire, piano string, and motor | 27 15/16 x 22 3/8 inches (71 x 56.8 x 26.7 cm) | 78  | 107676                     | =T3*F3*G3        | \$3,009,467.59    | \$9,851,505.01 |  | 732 \$             | 0.72 \$           | 1.53  |
|   |                        |  |  |     |                            |                  |                   |                |  | 46175 \$           | 0.05 \$           | 0.05  |
|   |                        |  |  |     |                            |                  |                   |                |  | 156692 \$          | 0.18 \$           | 0.18  |
|   |                        |  |  |     |                            |                  |                   |                | Mean  | \$                 | 0.32              |       |
|   |                        |  |  |     |                            |                  |                   |                | Standard Dev.   | \$                 | 0.36              |       |
|   |                        |  |  |     |                            |                  |                   |                | Relative Std.D  |                    | 112%              |       |
| Valuation Logic, Terms & Conditions                                 |                        |  |  |     |                            |                  |                   |                |   | Moving Avg. Per    |                   | 37.5% |

Equation 9 - Gross Value of Guggenheim's artwork

$$\begin{aligned} & \text{Present value of price } \$/\text{-per cm}^2 \text{ /year} \times \text{Guggenheim's artwork} \times \text{Age} \\ & \qquad \qquad \qquad = \text{Gross Value} \\ & \text{Gross Value} \times (\text{Age}/10\text{years}) \times 3\% = \text{Blockage Discount } \$ \text{ Value} \\ & \text{Gross Value} - \text{Blockage Discount } \$ \text{ Value} = \text{FMV value} \end{aligned}$$

With the present value of Price \$/-per cm<sup>2</sup> /year as of Sale as of the current year made known, we can use this price denominator \$1.53 to calculate the gross value of Guggenheim's collected Alexander Calder's *Mobile with Four Spots c.1941* that amounts to \$12,860,972.60 from Equation 9. After an adjustment of 3% blockage discount of \$3,009,467.59 deducted from the gross value, the fair market value estimates to \$9,851,505.01.

### Limitations and Evaluation of Artists

After thorough research on the 35 artists' biodatas and reviewing all of their sold comparable artworks available using online auction price databases and the Frick and Watson libraries, we can identify the number of Guggenheim's deaccessioned artworks in recent auction sales and realized a total FMV. The grand estimated FMV of Guggenheim Founding Collection amounts to \$1.47 billion dollars. Not every artist could be measured with a clear comparable. Seventeen artists had less than two artworks being collected, sometimes commissioned directly by Solomon Guggenheim or originating post-war.

Due to rarity, this posed as a challenge when finding suitable comparables. The following table 6 shows the final FMV database of Guggenheim founding collection:

| Guggenheim Founding Collection of 35 artists (Primary market / creation year of artwork bought timeline 1929 to 1949) |  |                 |                 |                |                 |             |
|---|--|-----------------|-----------------|----------------|-----------------|-------------|
| No.   | Artist   | Number of works | Gross Value     | Blockage Disc. | FMV             | Deaccession |
| 1   | Rudolf Bauer b. 1889 - d. 1953                       | 7               | \$1,909,223     | \$508,241      | \$1,400,981     | 0           |
| 2   | Harry Bertoia b. 1915 - d. 1978                      | 3               | \$1,521         | \$348          | \$1,173         | 0           |
| 3   | Pierre Bonnard b. 1867 - d. 1947                     | 1               | \$18,162,193    | \$4,576,873    | \$13,585,320    | 0           |
| 4   | Alexander Calder b. 1898 - d. 1976                   | 1               | \$12,860,973    | \$3,009,468    | \$9,851,505     | 0           |
| 5   | Marc Chagall b. 1887 - d. 1985                       | 10              | \$82,735,875    | \$24,951,845   | \$57,784,030    | 1           |
| 6   | Robert Delaunay b. 1885 - d. 1941                    | 8               | \$34,639,944    | \$11,062,779   | \$23,577,165    | 3           |
| 7   | Claire Falkenstein b. 1908 - d. 1997                 | 1               | \$23,545        | \$5,298        | \$18,248        | 0           |
| 8   | Lyonel Feininger b. 1871 - d. 1956                   | 2               | \$61,033        | \$15,746       | \$45,286        | 0           |
| 9   | John Ferren b. 1905 - d. 1970                        | 2               | \$163,496       | \$40,220       | \$123,276       | 0           |
| 10  | Naum Gabo b. 1890 - d. 1977                          | 4               | \$692,080       | \$169,258      | \$522,823       | 0           |
| 11  | Albert Gleizes b. 1881 - d. 1953                     | 11              | \$5,058,349     | \$1,568,068    | \$3,490,281     | 5           |
| 12  | Juan Gris b. 1887 - d. 1927                          | 1               | \$2,852,380     | \$872,828      | \$1,979,551     | 0           |
| 13  | Vasily Kandinsky b. 1866 - d. 1944                   | 44              | \$744,145,091   | \$225,421,501  | \$518,723,590   | 15          |
| 14  | Paul Klee b. 1879 - d. 1940                          | 5               | \$1,334,498     | \$367,804      | \$966,694       | 0           |
| 15  | Fernand Léger b. 1881 - d. 1955                      | 9               | \$133,323,856   | \$41,810,461   | \$91,513,395    | 3           |
| 16  | Franz Marc b. 1880 - d. 1916                         | 17              | \$237,794,864   | \$76,014,066   | \$161,780,798   | 2           |
| 17  | Jean Metzinger b. 1883 - d. 1956                     | 2               | \$4,825,430     | \$1,545,310    | \$3,280,120     | 0           |
| 18  | Wallace Mitchell b. 1911 - d. 1977                   | 4               | \$1             | \$1            | \$1             | 0           |
| 19  | Amedeo Modigliani b. 1884 - d. 1920                  | 2               | \$496,387,446   | \$151,691,835  | \$344,695,611   | 2           |
| 20  | László Moholy-Nagy b. 1895 - d. 1946                 | 15              | \$33,234,766    | \$7,845,362    | \$25,389,404    | 5           |
| 21  | Piet Mondrian b. 1872 - d. 1944                      | 3               | \$58,261,988    | \$18,425,451   | \$39,836,537    | 2           |
| 22  | Ben Nicholson b. 1894 - d. 1982                      | 1               | \$240,315       | \$62,722       | \$177,593       | 0           |
| 23  | Gordon Onslow Ford b. 1912 - d. 2003                 | 4               | \$158,167       | \$36,449       | \$121,718       | 0           |
| 24  | Irene Rice Pereira b. 1902 - d. 1971                 | 1               | \$5,232         | \$1,240        | \$3,992         | 0           |
| 25  | Pablo Picasso b. 1881 - d. 1973                      | 4               | \$218,228,987   | \$70,815,289   | \$147,413,698   | 1           |
| 26  | Enrico Prampolini b. 1894 - d. 1956                  | 1               | \$494,866       | \$142,522      | \$352,345       | 0           |
| 27  | Hilla Rebay b. 1890 - d. 1967                        | 4               | \$21,089        | \$5,880        | \$15,209        | 0           |
| 28  | Henri Rousseau b. 1844 - d. 1910                     | 1               | \$4,174,211     | \$1,678,033    | \$2,496,178     | 0           |
| 29  | Rolph Scarlett b. 1889 - d. 1984                     | 1               | \$33,244        | \$7,679        | \$25,565        | 0           |
| 30  | Georges Seurat b. 1859 - d. 1891                     | 5               | \$17,090,138    | \$7,007,404    | \$10,082,734    | 0           |
| 31  | Gino Severini b. 1883 - d. 1966                      | 1               | \$1,574,132     | \$481,684      | \$1,092,447     | 0           |
| 32  | Alice Trumbull Mason b. 1904 - d. 1971               | 1               | \$19,858        | \$4,408        | \$15,449        | 0           |
| 33  | Georges Valmier b. 1885 - d. 1937                    | 1               | \$26,049        | \$7,737        | \$18,312        | 0           |
| 34  | Maria Helena Vieira da Silva<br>b. 1908 - d. 1992    | 1               | \$6,094,987     | \$1,517,652    | \$4,577,335     | 0           |
| 35  | Friedrich Vordemberge-Gildewart<br>b. 1899 - d. 1962 | 4               | \$833,351       | \$199,778      | \$633,573       | 0           |
|   |  | 182             | \$2,117,463,175 | \$651,871,241  | \$1,465,591,935 | 39          |

Table 6 - Guggenheim Founding Collection List

In addition, certain unique artworks that could not be measured fairly for FMV, because there were some works by artists Wallace Mitchell and Hilla Rebay whose works achieved only limited recognition. Wallace Mitchell is the only exceptional artist whom I had to place a \$1 estimate value. Research into his work produced almost zero sales record. Sold works found were deemed irrelevant as they did not meet the [1,2,3] prerequisites. As



for Hilla Rebay, she painted as a hobby rather than a career. Marc Chagall's watercolor on paper was a gift to Hilla Rebay in 1939. It is considered as a priceless and monumental art piece by the only surviving Jewish painter post World Wars. There was one similar painting gifted to Moma which was similar in style, however, not style or medium, thus was disqualified. There was no other records of other of his other artworks could be rival of this watercolor. The issue with valuating Harry Bertoia's *Untitled* monoprints and Irene Rice Pereira's *Untitled* gouache on board was that their comparables were found to be undervalued and they also have few track records of repeated auction sales. This limited the process of determining whether their FMV correlated with their other works.

Despite, (Goetzmann 2017) the art market is considerably less liquid than the financial markets. This illiquidity may be a cause the mechanisms by which information is processed through collectors, dealers, agents and auction houses that currently make up the market. The 50% price risk estimate may translate into a potential 50% dealer markup. Yet, according to Artprice's founder, the art market health is indispensable to the museum industry. This is regards to the rise of private collectors and how museums' permanent art collections on view influence general public's interest in both collecting and the choice of art; as he puts it "The inescapable processes of selection – indispensable to the Market's refinement – are at the heart of the Museum Industry, the growth of which represents a genuine revolution in Art History." Unfortunately, he failed to emphasize star auction lots such as Amedeo Modigliani's *Nu couché c.1918* sold at Christie's in 2015. This was a deaccessioned piece from Royal Academy of Arts, London that set an unprecedented hammer price of \$152,000,000. Then a latter *Nu couché (sur le côté gauche) c.1917*, sold at Sotheby's for a record price \$139,000,000 under a private collection in 2018.

Another example, Pablo Picasso's *Femme assise c.1909* sold at Sotheby's in 2016. It was deaccessioned from Washington DC's National Gallery of Art for a hammer price of \$56,252,350 and generated worldwide publicity for the auction house with commentary<sup>42</sup> "It has been decades since a Cubist painting of this caliber has been offered at auction.

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<sup>42</sup> <https://www.nytimes.com/2016/06/23/arts/design/picassos-femme-assise-sells-for-63-7-million-an-auction-high-for-cubism.html>

Virtually all the significant works of this period are in international museums and institutions.” So, is deaccessioned artwork from a museum permanent collection considered a disruptor in the art auction market?

There are thirty-nine deaccessioned comparable artworks found against ten Guggenheim artists’ permanent collection works. These 39 deaccessioned artworks were by artists of international recognition and global success including: Pablo Picasso, Amedeo Modigliani, Vasily Kandinsky, Marc Chagall, Franz Marc, Piet Mondrian, László Moholy-Nagy, Fernand Léger, Albert Gleizes, and Robert Delaunay. The artists who had more than three deaccessioned comparable artworks listed on the valuation excel database are: Vasily Kandinsky with fifteen works, Albert Gleizes with five, László Moholy-Nagy with five, Robert Delaunay with three, and Fernand Léger with three. Six deaccessioned works of were sold from Guggenheim and Museum of Non-Objective Paintings<sup>43</sup>. Five of these works were by Vasily Kandinsky and one by Albert Gleizes’. Discovered in the auction records of Kandinsky’s comparables, both Guggenheim and Museum of Non-Objective Paintings had been selling Guggenheim’s gifts under the radar at Christie’s and Sotheby’s since 2009. Amongst the thirty-five artists, Kandinsky has the highest number of deaccessioned works. His auction sales records fluctuate between polar extreme ends of the hammer price. Whereas, comparable artworks with sold hammer prices for artists without museum deaccession sales records show preceding prices that appear stable. The stretch of profit margin is not as volatile as artists who had several deaccession sales. It is quite evidently shown on t artists excel spreadsheets, if one had reviewed through the entire database.

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<sup>43</sup> The Museum of Non-Objective Paintings is part of Solomon R. Guggenheim Foundation that was founded in 1939.

## Auction Sales Analysis of Vasily Kandinsky

It is known that Solomon R. Guggenheim, counseled by Hilla Rebay in 1929, acquired more than 170 of works by Kandinsky. But, the collection now hold only forty-four of his paintings. After reading John Canaday's article<sup>44</sup> on Guggenheim deaccessioning, he writes the practice is widespread and is carried on significant scale and Guggenheim's decision to "sell from strength" several of its many Kandinsky works. This inspired the task of finding out what the actual appraisal value of a Kandinsky's painting worth in today's current market price. This final evaluation analyzes Vasily Kandinsky, the artist who produced the highest number of works later deaccessioned, most of which came from Guggenheim's Founding Collection. Recent auction data records exposed insight into what the art auction market had concealed during the valuation process of his work.

### Artist Bio:

Vasily Kandinsky, Bauhaus, b. 1866, Moscow; d. 1944, Neuilly-sur-Seine, France. He was credited as one of the founders of the Bauhaus movement during the early 20th century alongside great painters, Picasso and Piet Mondrian. Kandinsky's early works capture his days as representational artist. He later evolved to creating enigmatic and highly charged atmospheres and then to a self-contained geometric movement that convey the sense of a colorful life. 170 artworks were collected by Solomon Guggenheim. This included his blotch landscapes to fluid compositions to ornate deconstructed symbols and signs. 1913 was a particularly significant year as it marked a period of diverse experimentation from figuration towards definite abstraction. From representational to abstract expressionism to constructivism, Kandinsky's works entailed various levels of playful emotions, proliferating its way along the flow of lines, forms and constructs beyond imagination.

### Guggenheim Artworks on View Exhibition:

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<sup>44</sup> <https://news.artnet.com/opinion/deaccessioning-american-history-1338137>

Several Circles ( Einige Kreise ) c.1926, 140.3 x 140.7 cm, Oil on canvas



Accompanied Contrast (Contraste accompagné) c.1935, 97.1 x 162.1 cm, Oil on canvas



Dominant Curve ( Courbe dominante ) c.1936, 129.2 x 194.3 cm, Oil on canvas

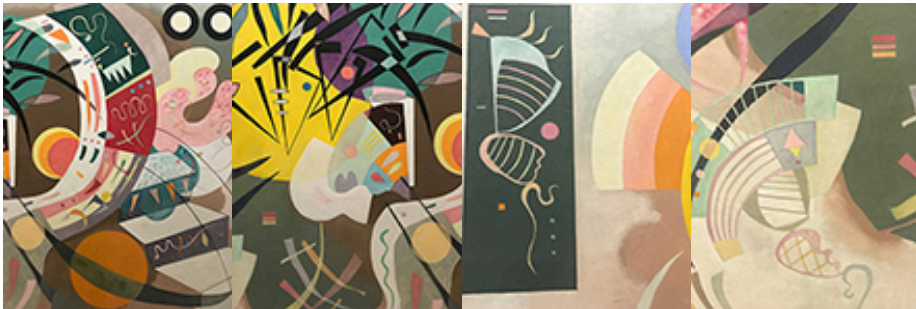


Table 7 - Vasily Kandinsky's Artworks on View at Guggenheim Museum

### Condition Report:

The above images account the damages that attribute to a decrease in the total value of the paintings. These damages can be observed by the naked eye when viewing the painting displayed at the Guggenheim museum. Currently, the paintings' ages range from 1926 to 1936. According to the pictorials illustrated on the above table, their ages are of follow 93, 84, 83 years old. It is obvious that the frame has been replaced with a matte-

white modern and minimalistic “Ikea-ribba” lookalike frames, mounted on a clear glass. Kandinsky was heavily influenced by the Bauhaus movement which explains his delicate and precise painting technique. The size of painting is roughly the height of an average male at the time it was created which further emphasized his ornate deconstructed symbols and signs subject. One can literally trace the connections between these symbols with his/her eyes moving along the shapes and translucent gradient colors. The arrangement of these shapes and symbols ameliorate this collage as it acts as a cache of remembrance while also signifying mysteriousness. Overall, the painting seems to be well-conserved as there is no visible cracking, but there is slight craquelure on the corners. There is no accretion on the painting’s surface, but the discoloration in the tonality of the red, yellow, green, blue and black pigments against the white background canvas have overtime lost their vibrancy. After attending a conservator’s lecture on Kandinsky, he mentioned that most of Kandinsky’s artworks have a history of bad restoration and over cleaning. With this consideration, the placement of the damage and loss value is 1% for every 10 years of a painting’s age.

Deaccession Comparable artworks:

1. Murnau landscape with green house c.1909, \$ 23,687,400 sold at Sotheby's UK, 2017.  
Deaccession Galerie Der Sturm (Herwarth Walden), Berlin
2. Weisser Klang (White Sound) c.1908, \$ 7,900,000 sold at Sotheby's US, 2011.  
Deaccession Secession Berlin
3. Herbstlandschaft (Autumn Landscape) c.1911, \$ 8,338,330 sold at Sotheby's UK, 2014.  
Deaccession New York, Museum of Non-Objective Paintings
4. Ohne Titel c.1916, \$ 4,215,400 sold at Sotheby's UK, 2015. Deaccession  
Schlossmuseum Murnau
5. Bild mit weissen linien (Painting with white lines c.1913, \$ 37,387,680 sold at  
Sotheby's UK, 2017. Deaccession Museum Penza
6. Sketch 1 for composition VII c.1913, \$ 8,050,000 sold at Sotheby's UK, 1992.  
Deaccession London, The Tate Gallery
7. Schwarz und Violett c.1923, \$ 11,100,000 sold at Christie's US, 2013. Deaccession  
Kunsthaus Zurich

8. Berührung (Contact) c.1924, \$ 1,446,332 sold at Sotheby's UK, 2013. Deaccession Kunsthaus Zurich
9. Oben und links c.1925, \$ 7,200,000 sold at Christie's US, 2017. Deaccession Solomon R. Guggenheim, New York
10. Grün c.1931, \$ 1,188,675 sold at Tajan Paris, FR 2007. Deaccession Tokyo, The Seibu Museum of Art
11. Pointes noires c.1937, \$ 5,000,000 sold at Christie's US, 2014. Deaccession Lugano, Museo d'Arte Moderna
12. Bindung (Binding) c.1932, \$ 1,600,000 sold at Sotheby's US, 2016. Deaccession N.Y., Museum of Non-Objective Paintings
13. Krass und mild (Dramatic and Mild) c.1932, \$ 9,400,000 sold at Sotheby's US, 2009. Deaccession New York, Solomon R Guggenheim Museum
14. Rigide et courbé c.1935, \$ 20,600,000 sold at Christie's US, 2016. Deaccession N.Y., Museum of Non-Objective Paintings
15. Milieu accompagné (Centre with accompaniment c.1937, \$ 3,990,000 sold at Sotheby's UK, 1993. Deaccession Los Angeles, County Museum of Art

Total Gross Estimate Value: \$744,145,090

Total Blockage Discount: \$225,421,501

Total Estimate Face value of 44 artworks: \$518,723,590

## Auction Price Analysis for Vasily Kandinsky

Table 8 - Vasily Kandinsky Data Table

| Valuation Logic, Terms & Conditions   |  |   |       |          |               |
|---|--|---|-------|----------|---------------|
| <p>FMV is calculated by the most logical comparable found with its last auction sale price and year. The nearest comparable is identified and measured by the closest either to the likeness, by age, size medium, finish surface, subject matter or artistic style.</p>            | <p>Artprice: \$100 invested in a work by Wassily KANDINSKY in 2000 would be worth an average of \$175 (+ 75%) in December 2019<br/>                     Ranking in 2018 – 27, in 2019 -<br/>                     Price evolution 2018 - 41%<br/>                     Number of lots sold in 2018 – 109<br/>                     Turnover in 2018 - \$81,255,696<br/>                     % of bought-in lots (prints excluded) in 2018 - 30.6%<br/>                     Geographic distribution over the past 10 years - United States (49%)</p> | <p>Mean of Artprice's investment insight, threshold max. 19 years inflation. 43% for Yr2000 to 2019. 2% increment per year.</p> | 43%   | 2%       |               |
| <p>Blockage Discount (2%) is including damage &amp; loss value (1%), taken for every 10 years is 3%. If age 107 years, is 32.1% discount. In order to calculate the relative Standard Deviation, min. 3 comparables are used to compare the average of the recent auction data.</p> | <p>Remarks: Kandinsky's artworks have a history of bad restoration and over cleaning, this is taken into account that the damage and loss value is 1% for every 10 years. His style was loosely based on the symbolic language of nature for visualizing, and creating two-dimensional representations of abstraction geometry.</p>  | <p>Mean of Relative Standard Deviation, threshold (Yr2019 - Oldest auction Yr record) of inflation</p>                          | 108%  |          |               |
|   |  | <p>Moving Avg. % Per Yr</p>   | 3.10% |          |               |
|   |  | <p>Relative Std.D</p>   | 108%  | Mean     | Standard Dev. |
|   |  |   |       | \$ 13.97 | \$ 15.16      |

The five deaccessioned artworks by Kandinsky mentioned in table 6, *Herbstlandschaft (Autumn Landscape)* c.1911, *Oben und links* c.1925, *Bindung (Binding)* c.1932, *Krass und mild (Dramatic and Mild)* c.1932, *Rigide et courbé* c.1935, details that Guggenheim has sold three pieces of Kandinsky artworks to Sotheby's and two pieces to Christie's. With a staggering hammer price sale total of \$47,138,330 between the years of 2009 to 2017. The total overall hammer price sale for all Kandinsky deaccession artworks amount to \$151,103,817 from various years of auction sales.

The average increment percentage of the next auction price for Kandinsky is 43% taken from Artprice data analytics. However, from my analysis, a Guggenheim deaccession artworks' average increment percentage of the next auction price is 31%. After adjusting the blockage discount, damage and loss value, and past estimates against the moving averages of the comparable artworks, derived from the forty-four Kandinsky artworks' total fair market value of \$518,723,590. An estimate valuated price-to-date Kandinsky oil on canvas artwork could fetch about \$11,789,172 today. It was quite disheartening to find international museums are also deaccessioning his works at beginning of mid 2000s.



Figure 5 - *Rigide et courbé* c.1935, Vasily Kandinsky pictured with his painting.

For the most important reason, if an artwork's provenance under a famous museum name, it could fetch higher auction prices. For example, the highest hammer price achieved to date for a deaccession Guggenheim's Kandinsky artwork was *Rigide et courbé* c.1935, oil and sand on canvas with a size of 114x162.4 cm, that was sold at Christie's US 2016 for \$20,600,000. The following advertising text taken from Christie's 2016 Impressionist and Modern Art evening sales, the auctioneer spoke about how "*Rigide et courbé*" (Rigid and Curved) is one of the most celebrated and dynamic compositions of grand scale, painted sand mixed with oil paint, a technique Kandinsky used only in his Paris paintings of 1934 to 1935. It was offered from an important private American collection and had not been on the market since 1964." The fundamental question of capitalizing a museum quality work of art at the expense of the museum founder's gifts, unravels the public's loss to access patrimony to one of Kandinsky's important works. The style of Constructivism was extensively published and highly exhibited at the Museum of Non-Objective Paintings from 1937 to 1949. With such a hefty price tag on the line, it is impossible for other non-profit institutions to acquire back from private hands. Perhaps, the likelihood of the painting will never surface in public sight again.

<sup>45</sup> <https://www.christies.com/features/Wassily-Kandinskys-Rigide-et-courbe-7707-3.aspx>





Figure 6 - *Oben und links* c.1925 vs *Vertiefte Regung (Deepened Impulse)* c.1928

By comparing with the most reasonable sold deaccession artwork nearest by age, size, medium, aesthetics and recent auction sales date – *Oben und links* c.1925 oil on canvas 69.9x49.8 cm, hammer price \$ 7,200,000 sold at Christie's US, 2017, deaccession from Solomon R. Guggenheim, against the bigger piece of *Vertiefte Regung (Deepened Impulse)* c.1928 oil on canvas 100x76 cm, hammer price \$6,857,200 sold at Sotheby's US 2019 consigned by a private collector, postulates a remarkable size difference between the two artworks of 4119 cm<sup>2</sup> and a loss of (\$342,800) 5% in value.



Figure 7 - *Spalte Fissure* c.1926

Using the same deaccession piece *Oben und links* c.1925 against a smaller artwork *Spalte Fissure* c.1926 oil on board 50x37 cm, hammer price \$1,201,165 sold at Galerie Kornfeld Auktionen SWISS 2019, also consigned by a private collector, derives the mere size difference between the two artworks of 1631 cm<sup>2</sup> and an outstanding loss of (\$5,998,835) 83% in value.



Figure 8 – *Herbstlandschaft (Autumn Landscape)*, 1911

*Herbstlandschaft (Autumn Landscape)* c.1911 appeared in auction sales three times, in 1989, 2013 and 2014. The first sales in 1989 lot 33 at Sotheby's with an estimate of \$3 to \$4 million did not sell. The second sales in 2013 lot 41 at Christie's with an estimate of \$20 to \$25 million did not sell. However, with the third sales in 2014 lot 30 at Sotheby's with an estimate of \$5.1 to \$8.5 million a lower valuation by 66% from Christie's. It finally sold with a hammer price of \$ 8,338,330 with a buyer's premium of \$1,140,989 in London UK under the provenance of New York, Museum of Non-Objective Paintings, 1945.

We can conclude that auctioning off a deaccession museum work of art has more value-added incentives, due to the fact, the art formally belongs to the renowned Guggenheim museum rather than a privately-owned collection, firstly it generates free publicity for the auction house that builds up consumer buying confidence in art and secondly, a rare piece of Kandinsky is up for sale. Although, given both sold comps authenticate a pristine provenance, sorted through the same due diligence checks, at mint physical condition, and were consigned to an auction house, the main influencing factor affected the loss in price value is probably where the art auction was taken place. Thence, the auction market is likely driven by four common sense questions: (Rush 1961) Who offers it for sale? Where and when is it offered for sale? Who attends the sale? Who is the auctioneer for the evening sales?

## CONCLUSION

The challenges of establishing the Fair Market Value of Guggenheim Founding Collection propels us to key intangible valuation factors like provenance and irrational estimation. Whether an artwork from a museum collection qualifies for either of these factors always involves a judgment call from expert appraisers. And there is no single rule exists that has all the answers for every work of art and every successful combination to a transaction. Art valuation still need the physical eye of well-versed experts with years of experience in this specialized field, more than any objective data about previously established price records. (McNully 2006) While auction sale might be deemed the “most relevant market” in some circumstances, at the end of the day, the specific nature of each pieces of art will be used to determine most relevant market. We cannot presume a value museum collection solely based on today’s comparables auction prices, it will be unfair.

The practices of deaccessioning has changed the definition of museum permanence and how a public collection accolades its mission. (Gammon 2018) Although deaccessions are necessary to refine museum collections, as the idiosyncrasies of collecting interests often shape in forming the museum’s mission. Fashion and taste of art is ever changing with time. However, abandoning works risks sacrificing historic importance of cultural heritage that may lead to public outrage of why the decision makers of the non-profit organization make hast to sell out old works. The conflicting view about considering an artwork as a financial asset, raise concerns about deaccessioning to pay for operating costs or debts, museum association ethical guidelines, as well as, the core mission of museums to hold artworks on behalf of the public trust. This will create long-term repercussions for donors who could potentially lose faith in the institution and reduce their donations of art and money. So, cultural institutions must carefully consider the long-term implications of excessive deaccessioning, which could cause both positive and negative consequences. Reasons why the value of the entire art collection is not recorded in the restricted new assets, because the value would be tremendous and on a museum balance sheet it will appear that they are on high surplus. This will cost the donors to reduce contributions.

From the reading of 990s, by assigning a fair market value to non-profit organization's collection can strengthen its name. With recognition of a renowned museum in the world which has a substantial collection e.g. the MET, would propagate unequivocal causes of funding, donations and support. When the public has a greater understanding of the value of a museum they are supporting, they are more likely to support it. Nevertheless, the disposition of consigning a museum work of art should be rethought and re-strategized. (Livedalen 2018) Museums should have an internal control to prevent the sale proceeds from mismanagement, and clearly state how to account for deaccessioning and protect the capital of their collections. If art in a museum is being valued as "priceless" or \$1 and is technically owned by the people, before any decision making of a deaccession, the process must be made known to public as consent. Otherwise, deaccessioning of any artworks should be announced and publicized on its website with a written deaccessioning report required to meet the AAMD's criteria, as well as, reporting on the following fiscal year 990 tax form for future accrued income, so that any non-for-profit organizations cannot mismanage public funds.

Through interrogating how power within a patriarchal ideology of the art world, leads us to a ideological representation of art collection as finance investment, and from the findings of museum deaccessioning, we learnt how this is has been fed into the museum world. It will ultimately affect the public to access rare art in the near future. We need the arts because arts make us human beings. But we also need the arts as a protective factor against authoritarianism. In saving the arts, we save ourselves from a society where capitalized production and ideology are permissible only insofar as it serves the instruments of power.

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