Investing in Luxury? Birkin Bag as a new Alternative Investment

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Department of Marketing, Strategy and Operations

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Resumo

Os dois capítulos seguintes apresentam uma análise aprofundada das malas Hermès Birkin enquanto investimento alternativo, contrastando o seu desempenho com o dos activos financeiros tradicionais entre 1998 e 2023. Recorrendo a uma análise empírica e a regressões hedónicas, o estudo analisa os factores determinantes dos preços de leilão das malas Birkin, centrando-se em variáveis como o ano de produção, o tamanho e, nomeadamente, a categoria de cor. A investigação revela o perfil de investimento distintivo das malas Birkin, marcado por uma resiliência e rentabilidade superiores às de activos tradicionais como o S&P 500, o ouro, as T-Notes e o imobiliário, evidenciado pelos seus excepcionais retornos médios e máximos.

Os resultados do Capítulo 4 revelam que as malas Birkin, sustentadas pela sua exclusividade e raridade, não só se mantêm como aumentam significativamente de valor, oferecendo rendibilidades mais elevadas em comparação com os investimentos normais. O Capítulo 5 avança esta análise ao utilizar o Índice de Bolsas Hermes e um modelo de regressão hedónica para dissecar a influência de atributos específicos - como a cor, o tamanho e o material - nos preços de leilão das bolsas. Os resultados sublinham o impacto significativo destas características no valor de mercado, reforçando o estatuto da Birkin como um investimento lucrativo.

As bolsas Hermès Birkin como uma classe de ativo dinâmica e potencialmente lucrativa dentro de um portfólio de investimentos diversificado, refletindo a interação complexa da alta moda, arte e finanças. Isso sublinha a importância de uma gestão informada e de um profundo entendimento das dinâmicas do mercado de luxo para investidores que se aventuram neste nicho, mas promissor, corredor de investimento.

Palavras-chave: Investimentos Alternativos, Bens de Luxo, Análise de Mercado, Desempenho do Investimento, Volatilidade dos Activos, Avaliação da Categoria de Cor
Classificação JEL: G11 (Decisões de Investimento), M31 (Marketing), M10 (Business Administration: General)

Abstract

The following two chapters present an in-depth analysis of Hermès Birkin bags as an alternative investment, contrasting their performance with that of traditional financial assets between 1998 and 2023. Using empirical analysis and hedonic regressions, the study analyses the determinants of Birkin bag auction prices, focusing on variables such as year of production, size and, in particular, colour category. The research reveals the distinctive investment profile of Birkin bags, marked by greater resilience and profitability than traditional assets such as the S&P 500, gold, T-Notes and property, evidenced by their exceptional average and maximum returns.

The results of Chapter 4 reveal that Birkin bags, underpinned by their exclusivity and rarity, not only hold up but also increase significantly in value, offering higher returns compared to normal investments. Chapter 5 advances this analysis by using the Hermes Bag Index and a hedonic regression model to dissect the influence of specific attributes - such as colour, size and material - on the bags' auction prices. The results emphasise the significant impact of these characteristics on market value, reinforcing the Birkin's status as a lucrative investment.

Hermès Birkin bags as a dynamic and potentially lucrative asset class within a diversified investment portfolio, reflecting the complex interplay of high fashion, art and finance. This underlines the importance of informed management and a deep understanding of luxury market dynamics for investors venturing into this niche but promising investment corridor.

Keywords: Alternative Investments, Luxury Goods, Market Analysis, Investment Performance, Asset Volatility, Colour Category Valuation

JEL Classification: G11 (Investment Decisions), M31 (Marketing)**,** M10 (Business Administration: General

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Glossary of Acronyms and Terms

Artcurial	A French auction house that specializes in the sale of art and luxury items, including Hermès Birkin bags.
Bloomberg Terminal	A software system provided by Bloomberg L.P. that enables finance professionals and other industries to monitor and analyse real-time financial market data and place trades.
CAGR (Compound Annual Growth Rate)	The rate of return that would be required for an investment to grow from its beginning balance to its ending balance, assuming the profits were reinvested at the end of each period of the investment's lifespan.
EUR (€)	Euro - The official currency of 19 of the 27 European Union countries, used in this thesis to denote the prices and returns on investments.
FRED (Federal Reserve Economic Data)	A comprehensive database of economic data maintained by the Research division of the Federal Reserve Bank of St. Louis.
NPV (Net Present Value)	A financial metric that calculates the present value of all cash flows related to an investment, including initial capital investment, considering the time value of money.
S&P 500 (Standard & Poor's 500 Index)	A market-capitalization-weighted index of 500 of the largest publicly traded companies in the U.S., used to measure the stock market's performance.
SD (Standard Deviation)	A statistic that measures the dispersion of a dataset relative to its mean, used to indicate the volatility of investment returns.
T-Notes (Treasury Notes)	Fixed income securities issued by the U.S. government with maturity periods ranging from 2 to 10 years.
USD ($)	United States Dollar - The official currency of the United States, referenced in the thesis for comparative analysis of investments.

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CHAPTER 1

1.Introduction

The transition from the "Set It and Forget It" era to the current "Let's Build a Solution"[1] era marks a significant turning point in the wealth management and investment industry. This change reflects an evolution from traditional investment strategies, based on a passive approach and a reliance on established theories like the Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model (CAPM), towards a more dynamic and personalized investment landscape. During the "Set It and Forget It" era, investment portfolios were primarily composed of actively managed equity and bond funds, aiming to achieve risk-adjusted returns through diversification and professional risk management. This approach was characterized by the pursuit of outperforming market benchmarks and a strong emphasis on collective investment instruments like mutual funds.

In the 1970s, following the tumultuous 1960s and the back-office paperwork crisis[2]), the wealth management and investment industry began to take shape through a series of innovations and regulatory reforms. The introduction of the first electronic stock exchange and the end of fixed commissions on stock trades in the United States marked the beginning of the "Set It and Forget It" era.[3] During this period, institutional investors adopted quantitative frameworks such as Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model (CAPM) to create diversified portfolios aimed at providing risk-adjusted

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[1] On the verge of transformation: The state of investment and wealth management in 2023–2024
 https://www.franklintempleton.lu/articles/2023/disruption/industry-advisory-services-annual-survey
[2] Brooks, John (1973), The Go-Go Years: The Drama and Crashing Finale of Wall Street's Bullish 60s, Allworth Press
[3] Traflet, Janice M. (2013), A Nation of Small Share-Holders, Johns Hopkins Press

returns. This era was characterized by a relatively passive approach to investing, with a strong emphasis on diversification through mutual funds and professionalized risk management.[4]

However, with the advent of the new millennium, a significant paradigm shift occurred. The industry moved towards a more active and personalized approach to investment management, marking the start of the "Let's Build a Solution" era. In this context, portfolio managers began to leverage a much broader range of investment tools, going beyond traditional equity and bond funds to include passively managed index funds, privately managed alternative strategies, and hedge funds. This transition was driven by a growing recognition of the importance of tailoring investment strategies to meet the specific needs of each investor, reflecting the evolution of market preferences and technological innovation.

Alternative investments, in particular, have gained considerable importance in the current landscape, offering diversification opportunities and potential risk-adjusted returns that complement traditional equity and bond assets. The increasing complexity of financial markets and innovation in investment products have made these instruments essential for building resilient and high-performing portfolios.

This thesis aims to explore in-depth the evolution of alternative investments and the growing emphasis on luxury assets. Through the analysis of price trends, case studies, and empirical data, the work intends to offer a comprehensive view of how alternative investments can be adapted to meet the needs of an ever-evolving investment environment.[5]

1.1 What are investments?

Investments are financial assets or instruments acquired by individuals, businesses, or institutions with the expectation of generating future income, capital appreciation, or both.[6] The

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[4] Seligman, Joel (2003), The Transformation of Wall Street: A History of the Securities and Exchange Comission and Modern Corporate Finance, Aspen Publishers
[5] Wells, Wyatt (2000) '' Certificates and Computer: The Remaking of Wall Street, 1967 to 1971, Business History Review, Summer
[6] Graham, Benjamin (1949), The intelligent Investor, Harper USA

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primary goal of investments is to grow wealth over time. Investors allocate funds into various types of assets with the aim of earning a return on their capital.

There are several forms of investments, each with its unique characteristics, risk levels, and potential returns. Common types of investments include stocks (equities), bonds (fixed-income securities), real estate, mutual funds, exchange-traded funds (ETFs), and various financial instruments. The choice of investment depends on an individual's financial goals, risk tolerance, and investment horizon.

Investors may pursue different investment strategies, such as long-term growth, income generation, or a combination of both. The performance of investments can be influenced by factors such as market conditions, economic trends, and the specific attributes of the chosen assets.

In summary, investments involve the strategic allocation of capital with the expectation of achieving financial objectives, whether through capital appreciation, regular income, or a combination of both. The world of investments is diverse and dynamic, requiring thoughtful consideration and analysis to make informed decisions that align with an investor's financial goals.

1.2 What are traditional investments?

Traditional investments, also known as traditional asset classes, refer to well-established and widely-recognized financial instruments that have been a part of the mainstream investment landscape for many years. These investments are characterized by their stability, liquidity, and relatively predictable returns. Here are some key traditional investment categories:

Stocks (Equities):
- Stocks represent ownership in publicly traded companies, entitling shareholders to a portion of the company's profits. The economic rationale lies in the potential

for capital appreciation and dividends, reflecting the company's financial performance and growth prospects.

Bonds (Fixed-Income Securities):

- Bonds are debt securities issued by governments, municipalities, or corporations. Investors who purchase bonds are essentially lending money to the issuer in exchange for periodic interest payments and the return of the principal amount at maturity. – Bonds are debt securities, where investors lend money to an entity (government or corporation) in exchange for periodic interest payments and the return of principal at maturity. The economic dynamics involve interest rates, yield curves, and the perceived creditworthiness of the issuer.

Cash and Equivalents:

- Cash and equivalents include highly liquid and low-risk instruments such as Treasury bills, money market funds, and certificates of deposit (CDs). These investments provide stability and are easily convertible to cash.

Real Estate Investment Trusts (REITs):

- REITs are companies that own, operate, or finance income-generating real estate. Investors can buy shares in REITs, gaining exposure to real estate markets without the need to directly own physical properties.

Mutual Funds:

- Mutual funds pool money from multiple investors to invest in a diversified portfolio of stocks, bonds, or other securities. They are managed by professional fund managers and offer investors a way to access a diversified investment strategy.

Exchange-Traded Funds (ETFs):

- Similar to mutual funds, ETFs are investment funds that trade on stock exchanges. They typically track an index or a specific sector, providing investors with a convenient way to gain exposure to various markets.

Traditional investments are considered core components of a diversified portfolio, offering a mix of growth potential, income, and capital preservation. Investors often combine these assets based on their financial goals, risk tolerance, and time horizon to create a well-balanced investment strategy.

1.3 Alternative Investments:

Alternative investments involve the strategic allocation of capital into mostly tangible assets that embody both aesthetic and historical value. This category primarily comprises art, wine, and classic cars, where investors engage not only for potential financial gains but also for the intrinsic appeal of the items.

While Alternatives Investments offer distinct investment opportunities, they present challenges, including market volatility, subjective valuation, and the requirement for specialized knowledge in each respective niche.

Beyond the conventional trio of art, wine, and cars, alternative collectibles include rare coins, stamps, rare books, and memorabilia from sports or entertainment. These niche assets cater to specific markets and offer unique investment prospects.

Investors frequently explore alternative investments to enhance portfolio diversification, mitigate risks, and potentially achieve higher returns. However, a careful assessment of risks and comprehensive research is imperative before venturing into these less conventional asset classes.

Investing in Alternatives investments has been a time-honored practice for individuals seeking both aesthetic pleasure and financial gains. Among the diverse array of collectibles, art, wine, and cars stand out as timeless and tangible assets that have captivated enthusiasts and investors alike. This chapter delves into the allure of these three categories, exploring their historical significance, unique characteristics, and the evolving landscape of their respective markets.

1.3.1 Art as an Investment: A Canvas of Value

The allure of art as an investment lies in its subjective nature. Trends in the art world can shift rapidly, influenced by cultural movements, artist reputations, and societal changes. Understanding the intricate dynamics of this market requires a keen eye for talent, an appreciation for artistic evolution, and a willingness to take calculated risks.

Investing in art has long been revered as a sophisticated strategy for diversifying portfolios and capitalizing on the intrinsic value of cultural assets. As an alternative investment avenue, art offers investors a unique blend of aesthetic pleasure, historical significance, and potential financial gain. The art market, characterized by its dynamic nature and cultural resonance, presents compelling opportunities for investors seeking to navigate the intersection of passion and profit.

Art, in its various forms—paintings, sculptures, photographs, and installations—has demonstrated historical appreciation in value, transcending economic cycles and market fluctuations. Masterpieces by renowned artists like Picasso, Monet, and Warhol have commanded astronomical prices at auctions and private sales, reflecting the enduring allure of fine art as a tangible store of value.

Investors recognize the potential of art to appreciate over time, driven by factors such as artist reputation, provenance, artistic innovation, and cultural significance. The scarcity of original artworks contributes to their investment appeal, with certain pieces becoming coveted treasures sought by collectors and institutions worldwide.

Art investments offer diversification benefits within investment portfolios, complementing traditional asset classes such as stocks, bonds, and real estate. The non-correlation of art market returns with broader financial markets can enhance portfolio stability and mitigate risk during periods of economic uncertainty. As a tangible asset, art provides a hedge against inflation and currency devaluation, preserving wealth over the long term.

Investors strategically allocate capital to art investments based on considerations of risk tolerance, investment horizon, and liquidity preferences. By diversifying across different genres, periods, and artists, investors can build resilient portfolios that withstand market volatility while capturing the potential upside of the art market.

Successful art investors monitor market trends and art market dynamics to identify emerging opportunities and mitigate risks. The art market is influenced by factors such as auction results, museum exhibitions, academic research, and shifting collector preferences. Emerging artists, innovative techniques, and cultural movements contribute to the vibrancy and evolution of the art market, presenting avenues for growth and discovery.

Investors leverage art market intelligence, expert advice, and due diligence to navigate the complexities of art investing. They assess the quality, provenance, and authenticity of artworks, ensuring prudent decision-making in the pursuit of art as a viable alternative investment.

Investing in art transcends financial considerations, fostering cultural legacy and societal impact. Art collectors and investors contribute to the preservation and promotion of artistic heritage, supporting artists, museums, and cultural institutions. By participating in the art market, investors engage with the broader cultural landscape, enriching communities and facilitating creative expression.

In conclusion, art represents a compelling alternative investment for individuals seeking to diversify their portfolios and engage with the transformative power of cultural assets. Through strategic investment strategies, diligent research, and a passion for artistic expression, investors can unlock the potential of art as a tangible and enriching asset class, aligning financial objectives with cultural appreciation and long-term value creation.

1.3.2 Wine Investments: Aged to Perfection

Wine, a consumable luxury, has emerged as a unique alternative investment. Beyond the pleasure of a fine glass, collectors recognize the potential for wine to appreciate in value over time. Rare vintages, limited releases, and wines with a compelling history often become sought-after treasures in the world of wine investments.

The wine market is characterized by its sensitivity to factors such as vineyard conditions, weather patterns, and global demand. Investing in wine demands a nuanced understanding of the industry, from grape cultivation to the art of winemaking. As with art, the subjective nature of taste adds an element of unpredictability to wine investments, making it both a connoisseur's delight and an investor's challenge. Factors shaping wine investments include the conditions of vineyards, the historical importance of certain vintages, and the rarity of specific bottles.

Investing in wine represents a unique alternative investment strategy that combines the sensory pleasures of fine dining with the potential for financial appreciation over time. Beyond the simple enjoyment of a glass, astute collectors recognize the allure of wine as a tangible asset that can appreciate in value, driven by factors such as rarity, provenance, and historical significance. The world of wine investments is characterized by its sophistication, blending passion for oenology with the pursuit of investment returns.

Rare vintages, limited releases, and wines with compelling histories often become coveted treasures in the world of wine investments. The scarcity of certain bottles, coupled with their quality and prestige, contributes to their investment appeal. Collectors and investors seek out iconic wines from renowned regions such as Bordeaux, Burgundy, and Napa Valley, focusing on provenance and cellar conditions to ensure the authenticity and quality of their acquisitions.

The wine market is highly sensitive to factors such as vineyard conditions, weather patterns, and global demand. Vintage variations and production volumes impact the availability and pricing of wines, creating opportunities for savvy investors to capitalize on market trends.

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Successful wine investors possess a nuanced understanding of the industry, from grape cultivation and terroir to the art of winemaking and aging processes.

Investing in wine entails recognizing the historical importance of certain vintages and estates. Wines associated with prestigious vineyards, acclaimed winemakers, or landmark vintages often command premium prices in the secondary market. Investors leverage historical data, expert assessments, and industry trends to identify undervalued wines with potential for capital appreciation over time.

Similar to art investments, the subjective nature of taste adds an element of unpredictability to wine investments. Individual preferences, evolving consumer trends, and changing market dynamics influence the perceived value of wines. Successful wine investors embrace the complexities of taste and market sentiment, balancing personal enjoyment with investment objectives.

In conclusion, wine investments offer a compelling pathway for diversifying investment portfolios and engaging with the cultural legacy of oenology. By leveraging industry insights, market intelligence, and a passion for fine wine, investors can unlock the potential of wine as a tangible and rewarding alternative asset class, aging gracefully alongside traditional investments in pursuit of long-term financial growth and enjoyment.

1.3.3 Cars: Driving Investments Beyond the Road

Classic and luxury cars serve not only as symbols of automotive history but also as potential investment assets. Collectors are drawn to rare and iconic models, with the value of these vehicles frequently appreciating as they become coveted pieces of automotive heritage. Moreover, owning a luxury car often satisfies a desire for status and fulfillment, as these vehicles represent more than just transportation—they signify success, exclusivity, and personal achievement.

The allure of classic and luxury cars lies not just in their mechanics but in the stories each vehicle tells—a testament to design, engineering prowess, and cultural significance. These cars have transcended their utilitarian purpose to become highly sought-after collectibles. Classic cars, in particular, have proven to be resilient investments, appreciating in value over the years. The blend of historical significance and limited availability enhances their appeal, making them prized possessions for enthusiasts and investors alike.

Car collectors and investors navigate a market influenced by factors such as rarity, historical significance, and the reputation of specific models. The landscape of classic and luxury car investments is continually evolving, especially as the automotive industry undergoes technological transformations. This evolution introduces new considerations for investors seeking a blend of passion and profit.

The market for luxury cars is also driven by the psychological fulfilment they provide to their owners. People invest in luxury cars not only for their potential financial return but also for the prestige and satisfaction that come with owning a piece of automotive excellence. These cars are seen as status symbols, reflecting personal success and a taste for the finer things in life. As such, the desire to feel fulfilled and accomplished plays a significant role in the decision to purchase these high-end vehicles.

In summary, classic and luxury cars represent a unique intersection of passion, investment potential, and personal fulfilment. The ever-changing dynamics of the automotive industry continue to shape this market, offering opportunities for those who appreciate the intricate blend of heritage, innovation, and the quest for personal satisfaction.

1.3.4 Fashion Luxury Items as Alternative Investments

In the realm of alternative investments, luxury fashion items have emerged as a compelling asset class, offering investors a unique blend of aesthetic appeal and potential financial gain. Beyond their functional purposes, these items—ranging from haute couture garments to iconic handbags and exquisite jewellery—represent symbols of status, craftsmanship, and cultural significance. As traditional investment avenues face volatility and uncertainty, luxury fashion presents an intriguing opportunity for diversification and value appreciation.

Luxury fashion items possess inherent qualities that make them attractive to collectors and investors alike. They embody the pinnacle of design excellence, often crafted using the finest materials and techniques by renowned artisans. Each piece tells a story of creativity, innovation, and luxury heritage, resonating with individuals who appreciate artistry and exclusivity. This narrative-driven appeal contributes to the enduring demand and potential investment value of luxury fashion items.

Investors seeking to capitalize on the allure of luxury fashion navigate a dynamic marketplace influenced by various factors. Brand reputation plays a crucial role, with established fashion houses like Hermès, Chanel, Louis Vuitton, Gucci and Fendi commanding premium prices due to their legacy and global recognition. Rarity is another key determinant of value, as limited-edition releases and iconic designs with restricted availability often appreciate in price over time.

The reputation of established luxury fashion houses, such as Hermès, Chanel, Louis Vuitton, and Gucci, significantly impacts the investment value of their products. These iconic brands have cultivated a legacy of excellence in craftsmanship, innovation, and cultural significance, elevating their creations beyond mere accessories to coveted collectibles. The association with prestigious fashion houses adds intrinsic value to luxury fashion items, making them desirable assets for investors seeking stability and growth outside traditional financial markets.

Investors recognize the enduring allure of renowned fashion brands as a cornerstone of alternative investments, leveraging brand recognition to mitigate risks and capitalize on long-term value appreciation. The ability of luxury fashion items to transcend seasonal trends and

maintain relevance over time underscores their appeal as enduring assets within diversified investment portfolios.

The concept of rarity is a key driver of investment potential in luxury fashion. Limited production runs, exclusive collaborations, and iconic designs with restricted availability contribute to the scarcity of certain fashion items, intensifying demand among collectors and investors. Limited-edition releases and rare vintage pieces often appreciate in value over time, reflecting the principle of supply and demand in the luxury fashion market.

Investors strategically assess the rarity of fashion items as part of their investment strategy, identifying opportunities to acquire unique pieces with potential for capital appreciation. The scarcity-driven nature of luxury fashion investments introduces a dynamic element to portfolio management, offering investors an alternative pathway to diversification and wealth accumulation.

Successful investors in luxury fashion navigate market trends and consumer behavior to capitalize on emerging opportunities and mitigate risks. The fashion industry is characterized by evolving tastes, cultural influences, and technological innovations, shaping the demand for specific brands and styles over time. Investors leverage industry insights, trend analysis, and expert guidance to make informed decisions in the pursuit of sustainable returns from alternative investments.

By incorporating luxury fashion items into their investment portfolios, investors seek to achieve a balanced approach to wealth management, blending passion with profit in a dynamic and culturally significant market. The allure of luxury fashion as an alternative investment avenue underscores the transformative potential of tangible assets within a diversified investment strategy.

In conclusion, luxury fashion items represent compelling alternative investments for investors seeking to diversify their portfolios and capitalize on the enduring appeal of prestigious fashion brands. Brand reputation, rarity, and market dynamics converge to shape investment opportunities in luxury fashion, offering a pathway to stability, growth, and cultural enrichment within the realm of alternative investments. Through strategic analysis and a nuanced understanding of market forces, investors can unlock the transformative potential of luxury

fashion as a viable asset class, aligning passion with profit in the pursuit of long-term financial success.

CHAPTER 2

2. Hermès

Maison Hermès was founded in 1837 by Thierry Hermès, who increased his profits by opening a workshop for saddles and horse accessories.

In 1880, Charles-Émile Hermès, Thierry's son, shifted the workshop's focus to the production of bags and accessories for humans. He inaugurated Atelier Hermès in Paris, at 24 rue du Faubourg-Saint-Honoré, which remains the historic headquarters of the Maison.

Between the 1920s and 1930s, the company evolved thanks to the founder's grandson, Émile-Maurice Hermès, who began creating high-quality deerskin garments. In 1925, the first men's garment, a golf jacket, was produced. In 1927, a line of equestrian-inspired jewellery was launched, followed by a line of sandals in the following year.

In 1929, the first women's fashion collection was designed by Lola Prusac, which was so successful that a belt from the Maison was worn by Grace Kelly on the cover of Life Magazine in 1956.

In 1937, the famous Silk Carré was introduced, becoming one of the maison's hallmark items.

In 1949, responding to the demand for ties, the maison began producing silk ties, becoming a key element of the male wardrobe.

In 1951, the company passed to Robert Dumas, Émile Hermès' son-in-law.

In 1956, the Kelly bag, originally designed by Maison Hermès in 1892 as a "Haut à Courroies" bag to hold a horse saddle, was adapted for Émile-Maurice Hermès' wife, who was in search of the perfect bag. In 1935, Robert Dumas, a member of the Hermès family, redesigned this model, creating the "Sac à dépêches," the predecessor of the Kelly. However, it was only when Grace Kelly, Hollywood actress and later Princess of Monaco, was photographed in 1956 using one of these bags to hide her baby bump that the bag gained worldwide fame and was renamed in

her honour. The Kelly bag is distinguished by its trapezoidal design, meticulous handcrafted details, and the variety of sizes, colors, and materials available.

From the 1960s onwards, the Maison began to achieve significant success. In 1967, Catherine de Karolyi was entrusted with artistic creation, leading to the creation of the iconic H buckle.

From 1978, Jean-Louis Dumas, son of Robert, envisioned global expansion for the Maison.

In 1983, in the quest to create the perfect bag, the Maison created the Birkin bag. A detailed description of this follows.

Under the direction of Jean-Louis Dumas, Hermès expanded and opened numerous stores worldwide, including in New York in 2000, Tokyo in 2001 in a store designed by Renzo Piano, and Seoul in 2006.

In 2002, an e-commerce site was inaugurated, which arrived in France three years later.

In 2013, Axel Dumas, nephew of Jean-Louis, became the CEO of Hermès.

In 2018, the company is listed on the CAC 40 Paris Stock Exchange as Hermès International.

In 2022, it opens a new Maison on the Upper East Side, New York.

At the end of 2023 the company now employs over 22,040[7] people and runs 294[8] exclusive stores worldwide.

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[7] 2023 UNIVERSAL REGISTRATION DOCUMENT HERMÈS INTERNATIONAL https://assets-finance.hermes.com/s3fs-public/node/pdf_file/2024-03/1711537732/240326_hermes_2023urd_en.pdf
[8] UBIT

2.1 Financial figures

In 2023 Hermes recorded a consolidated revenue amounted to €13,427 million. A 21% increase compared to 2022. The amount of recurring operating income was €5,650 million, or 42.1% of sales. The net profit group share increased by 28% to €4,311 million.

1.5.3 KEY CONSOLIDATED FINANCIAL DATA

In millions of euros	2023	2022	2021	2020	2019
Revenue	13,427	11,602	8,982	6,389	6,883
Growth at current exchange rates vs. n-1	16%	29%	41%	(7)%	15%
Growth at constant exchange rates vs. n-1 [1]	21%	23%	42%	(6)%	12%
Recurring operating income [2]	5,650	4,697	3,530	1,981	2,339
in % of revenue	42.1%	40.5%	39.3%	31.0%	34.0%
Operating income	5,650	4,697	3,530	2,073	2,339
in % of revenue	42.1%	40.5%	39.3%	32.4%	34.0%
Net income attributable to owners of the parent	4,311	3,367	2,445	1,385	1,528
in % of revenue	32.1%	29.0%	27.2%	21.7%	22.2%
Operating cash flows	5,123	4,111	3,060	1,993	2,063
Operating investments	859	518	532	448	478
Adjusted free cash flows [3]	3,192	3,404	2,661	995	1,406
Equity attributable to owners of the parent	15,201	12,440	9,400	7,380	6,568
Net cash position [4]	10,625	9,223	6,695	4,717	4,372
Restated net cash position [5]	11,164	9,742	7,070	4,904	4,562
Headcount in number of people [6]	22,037	19,686	17,595	16,600	15,417

(1) Growth at constant exchange rates is calculated by applying, for each currency, the average exchange rates of the previous period to the revenue for the period.
(2) Recurring operating income is one of the main performance indicators monitored by Group Management. It corresponds to operating income excluding non-recurring items having a significant impact that may affect understanding of the Group's economic performance.
(3) Adjusted free cash flows are the sum of cash flows related to operating activities, less operating investments and the repayment of lease liabilities recognised in accordance with IFRS 16 (aggregates in the consolidated statement of cash flows).
(4) Net cash position includes cash and cash equivalents presented under balance sheet assets, less bank overdrafts which appear under short-term borrowings and financial liabilities on the liabilities side. Net cash position does not include lease liabilities recognised in accordance with IFRS 16.
(5) The restated net cash position corresponds to net cash plus cash investments that do not meet the IFRS criteria for cash equivalents due in particular to their original maturity of more than three months, less borrowings and financial liabilities.
(6) Headcount corresponds to employees on permanent employment contracts and those on fixed-term contracts of more than nine months.

Source: 2023 UNIVERSAL REGISTRATION DOCUMENT HERMÈS INTERNATIONAL[9]

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[9] 2023 UNIVERSAL REGISTRATION DOCUMENT HERMÈS INTERNATIONAL https://assets-finance.hermes.com/s3fs-public/node/pdf_file/2024-03/1711537732/240326_hermes_2023urd_en.pdf

2.2 Hermes Market Cap

Hermès had a 198.907 euros billion market capitalisation as of 16th September 2024.[10] This places Hermès as the 53th most valuable company in the world based on market value.[11] With a price per share of 1,896.00 euros. (Updated as of 16/09/2024)[12].

Source: Hermès International Société en commandite par actions Yahoo Finance[13]

2.3 The Birkin

It was the year 1983. Jane Birkin, a style icon and actress, was attempting to insert her bag into the overhead compartment of the plane when its contents began to rovesciar. Hermès's CEO, Jean Louis Dumas, who was nearby, acknowledges. Birkin explained that it was difficult to find a practical leather bag that she liked, and soon after, the Hermès Birkin tote was born. Only that, rather than being just another fashionable bag with functional features, it became "The" status symbol of the modern era, and it still is today.

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[10] Hermès International Société en commandite par actions (RMS.PA) Stock Price, News, Quote & History - Yahoo Finance
[11] (Hermès (RMS.PA) - Market capitalization (companiesmarketcap.com))
[12] RMS: Hermes International SCA Stock Price Quote - EN Paris - Bloomberg
[13] *Hermès International Société en commandite par actions Yahoo Finance* Hermès International Société en commandite par actions (RMS.PA) Stock Price, News, Quote & History - Yahoo Finance (16-09-2024)

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Hermès Birkin bags stand at the pinnacle of luxury handbags, celebrated for their unrivalled craftsmanship and exclusivity. Each Birkin bag is meticulously handcrafted by skilled artisans using the finest leathers and materials, reflecting Hermès' commitment to excellence. The scarcity of Birkin bags, coupled with high demand from affluent collectors, contributes to their extraordinary value in the secondary market. Prices for Hermès Birkin bags can range from tens of thousands to hundreds of thousands of dollars, with rare editions crafted from exotic skins or featuring custom details fetching astronomical sums at auctions. The investment potential of Hermès Birkin bags is undeniable, making them highly sought-after assets for discerning investors looking to diversify their portfolios with tangible luxury goods.

2.4 Marketing strategies of Birkin

Usually, when you want to buy a bag, you enter a store, see what you like, and then buy it. But it's not like that at Hermès.

Instead, if you want to buy a Birkin Bag, you need to have a sales history with the brand. Not everyone can purchase a Birkin Bag; the 'quota bag' will only be offered to the most loyal customers. Customers who want to buy a Birkin Bag must spend on regular lines, thereby ensuring regular income for the fashion house. Another reason why the fashion house does this is because they want customers to know and buy into the brand's heritage. By doing so, they build real relationships with the personal Sales Assistants (SAs) who, by knowing the customers personally, can offer the clients their own WISH.

In fact, the customer who wishes to buy a Birkin Bag must make an actual WISH to their SA, expressing their desire to have the Birkin and specifying the colour, material, and shape of the bag they want to acquire.
The waiting lists for a WISH to be fulfilled are very long and can last from 9 months to a year or even go unfulfilled.

With this marketing strategy, the Hermès brand has managed to create a true desire. Thanks to the exclusivity that the brand has managed to create, the bag is considered a status symbol and, due to its value, a true investment object.

CHAPTER 3

3. Hermès Birkin bags as an investment

The Hermès Birkin bag has seen significant fluctuations in price over the years. This chapter aims to explore whether a luxury handbag can be considered a viable alternative investment. As luxury goods increasingly become part of diversified portfolios, understanding the economic potential of such items is essential. Unlike traditional assets, luxury handbags offer both aesthetic pleasure and financial benefits, creating a unique blend of passion and profitability for investors.

The two following chapters presents an in-depth examination of Hermès Birkin bags as an alternative investment, contrasting their performance with traditional financial assets from 1998 to 2023. Employing empirical analysis and hedonic regressions, it delves into the determinants of auction prices for Birkin bags, focusing on variables such as production year, size, and notably, colour category. The research uncovers the distinctive investment profile of Birkin bags, marked by superior resilience and profitability over traditional assets like the S&P 500, gold, T-Notes, and real estate, evidenced by their exceptional average and maximum returns.

Findings from Chapter 4 reveal that Birkin bags, underpinned by their exclusivity and rarity, not only maintain but significantly increase in value, offering higher returns compared to standard investments. Chapter 5 advances this analysis by employing the Hermes Bag Index and a Hedonic regression model to dissect the influence of specific attributes—such as color, size, and material—on the bags' auction prices. The findings underscore the significant impact of these characteristics on market value, reinforcing the Birkin's status as a lucrative investment.

Hermès Birkin bags as a dynamic and potentially lucrative asset class within a diversified investment portfolio, reflecting the complex interplay of high fashion, art, and finance. It underscores the importance of informed management and a deep understanding of the luxury market dynamics for investors venturing into this niche yet promising investment avenue.

CHAPTER 4

4. The Birkin phenomenon: an investment analysis and appreciation over time

4.1 Summary Statistics

Analysing the price dynamics of Hermes Birkin bags has proven to be a formidable task due to a multitude of factors. Among these, the absence of a historical archive of retail prices on the official Hermes website stands out, as well as the limited availability of annual data regarding specific Birkin bag models on various digital platforms and blogs. This situation presents a significant challenge in utilizing such information to proceed with traditional linear regression analyses, especially considering the past two decades.

Nonetheless, through rigorous investigation and data collection from Artcurial's website, these obstacles have been surmounted. Artcurial, a company based in the heart of Paris, specializes in the organization of voluntary auctions, and boasts extensive experience in managing the sale of a wide range of items, including but not limited to the coveted Hermes Birkin bags.

The data corpus was extracted from the analysis of ten auctions conducted by Artcurial, identifying 320 Birkin bag specimens that were sold. For each transaction, it was possible to document not only the actual sale price but also the pre-auction estimate range provided by Artcurial, enriching the database with additional details such as the model's name, auction date, identification code, dimensions, colour, and year of manufacture.

For each lot auctioned, Artcurial proposes an estimated value range, which, while serving as a reference, does not necessarily imply the sale of the item at the indicated price, nor within the estimated range. The estimates provided should not be construed as a guarantee or certainty of sale, as explicitly outlined in Artcurial's terms and conditions of sale, which state:

"Estimates are provided for guidance only and cannot be considered as implying the certainty that the item will be sold for the estimated price or even within the bracket of estimates. Estimates cannot constitute any warranty assurance whatsoever."[14]

This clarification was essential to understand the speculative nature of such evaluations and to properly contextualize the analysis of the collected data. Given the definition, the initial market value indicator for each bag was adopted as the average of the price range estimate provided by Artcurial. This approach became indispensable due to the issue related to the absence of an official price for the over 320 bags included in the dataset under examination.

The decision to rely on this metric is based on Artcurial's recognized expertise in the auction sector; the company, with its many years of experience, ensures the plausibility and reliability of the price evaluations posted on its website for each lot offered.

The Figure 1 shows the first 10 rows of the dataset:

Date audictions	Auction ID	Name	Color	YEAR BAG	Size	estimation min	estimation max	Average Price	Sold for €
09/05/12	150	HERMES Birkin 35 cm	Courchevel Marine	1995	35	3000	3500	3250	5148
09/05/12	179	HERMES Birkin 35 cm	Gold	1997	35	2500	3000	2750	4633
09/05/12	195	HERMES Birkin 25 cm	Courchevel Bleu Jean	2009	25	4000	5000	4500	6178
09/05/12	214	HERMES Birkin 35 cm	Clémence Étoupe	2006	35	3500	4000	3750	6585
09/05/12	287	HERMES Birkin 25 cm	Rose Shocking	2007	25	3000	4000	3500	7207
09/05/12	291	HERMES Birkin 30 cm	Crocodile Amethyst	2009	30	14000	16000	15000	34750
09/05/12	297	HERMES Birkin 35 cm	Bleu Jean	2008	35	5000	6000	5500	12227
09/05/12	301	HERMES Birkin 35 cm	Bleu Jean	1998	35	20000	22000	21000	29602

Figure 1: The dataset

After reordering the entries in ascending sequence based on the auction date, a detailed analysis of the gathered information was undertaken.

For the calculation of various metrics and for the representation of the results that will be presented later, Microsoft Excel software and the Python programming language were utilized.

With the aim of deciphering the sales dynamics of Hermes - Birkin bags, several fundamental metrics such as minimum and maximum prices, as well as average sale values realized in the time frame between 2012 and 2024, were calculated, as illustrated in Table 1:

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[14]Artcurial, Condition of Sales, available on: https://storage.googleapis.com/download/storage/v1/b/art-fr-maya-prodinventory/o/66529%2FPURCHASING_CONDITIONS%2FM1092_CGA.pdf?generation=170945
9152957388&alt=media

Table 1: The fundamental metrics

	Mininum	Maximum	Average	Standard Deviation
Minimum Price	1.430	60.000	10.537	9.270
Maximum Price	1.550	1.550	14.067	12.376
Average Price	1.615	1.615	12.302	10.742
Sold for	2.860	2.860	17.372	13.524

Source: own analysis on Artcurial data

Table 2 presented below provides, for each auction year, the total number of Birkin bags put up for auction and reports the corresponding minimum, maximum, and average selling prices, expressed in euros:

Table 2: Auctions calculations

Year	Number of Bags Sold	Min Sales	Max Sales	Average Sale	Total Sales in €
2012	63	4.478,00 €	60.917,00 €	18.823,78 €	1.185.898,00 €
2013	61	4.676,00 €	77.385,00 €	19.840,30 €	1.210.258,00 €
2014	44	5.460,00 €	66.280,00 €	16.526,14 €	727.150,00 €
2017	15	7.150,00 €	44.200,00 €	16.475,00 €	247.125,00 €
2018	36	2.860,00 €	50.700,00 €	14.072,92 €	506.625,00 €
2020	18	4.550,00 €	65.000,00 €	13.158,89 €	236.860,00 €
2021	14	4.810,00 €	39.000,00 €	18.526,43 €	259.370,00 €
2022	43	5.850,00 €	44.850,00 €	16.197,67 €	696.500,00 €
2023	14	7.478,00 €	32.800,00 €	18.021,14 €	252.296,00 €
2024	12	9.184,00 €	59.040,00 €	19.734,67 €	236.816,00 €
Total	**320**	**2.860,00 €**	**77.385,00 €**	**17.371,56 €**	**5.558.898,00 €**

Source: own analysis on Artcurial data

Looking at the Table 2, it is noticeable that 2013 marked the highest sales volume, with a total revenue of €1,210,258, despite a lower quantity of bags sold compared to 2012. This indicates that the average selling price per bag in 2013 exceeded that of the previous year.

In 2014, there was a significant contraction in both the number of bags sold and the total sales volume. A marked decline is also observed in 2017, the year which saw the lowest number of pieces sold in the examined time frame, with total sales amounting to €247,125.

From 2018 onwards, the total sales volume remains at more contained levels compared to the peaks reached in 2012 and 2013, although in 2022 a significant increase in the number of bags sold is recorded, resulting in a total sales volume of €696,500. However, in 2024, with only 12 bags sold and an average selling price reaching the peak of €19,735 per unit, the total sales drop to €236,816.

The general trend of the average selling price is rising year after year, which could suggest an appreciation in the value of Birkin bags. This upward trend might be the result of a set of dynamics, including inflation, the increase in the product's exclusivity, or fluctuations in demand influenced by fashion trends and consumer preferences.

The total sales volume of €5,558,898, resulting from the transaction of 320 bags in the period analysed, underscores the market positioning of Birkin bags as high-value luxury goods, whose price can undergo considerable fluctuations depending on factors such as rarity, materials used, limited editions, and attractiveness according to seasons. Such information provides a significant overview of the evolution of the luxury goods market like Birkin bags over the years.
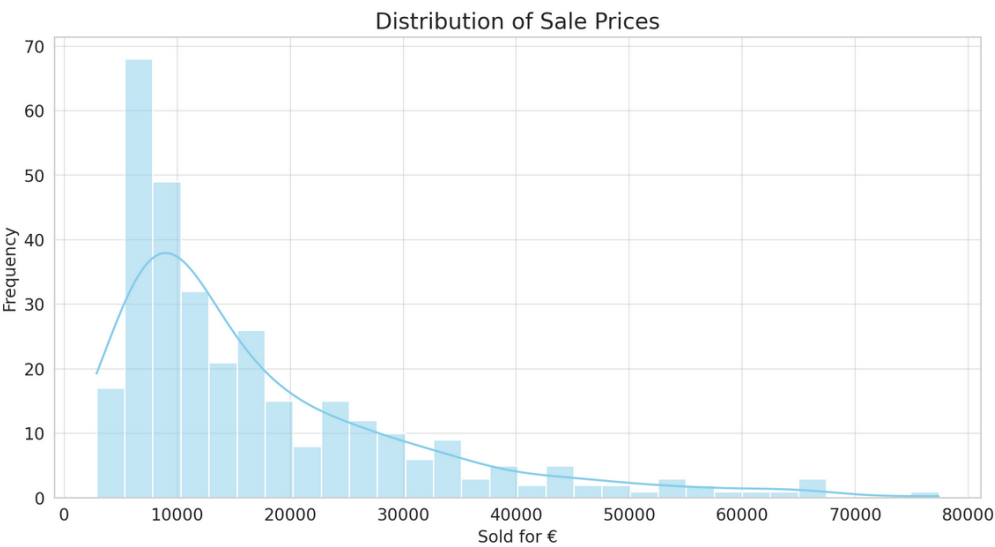
Figure 2: Distribution of Sales Prices

The overall distribution of selling prices (Figure 2) exhibits significant variability, with a long tail towards higher prices, indicating the presence of items sold at values substantially above the average. This observation reflects the heterogeneous nature of the market, where certain items, due to their unique features or rarity, manage to capture the attention of buyers and achieve exceptionally high selling prices. These dynamics underscore the importance of factors such as provenance, condition, and exclusivity in influencing an item's market value.
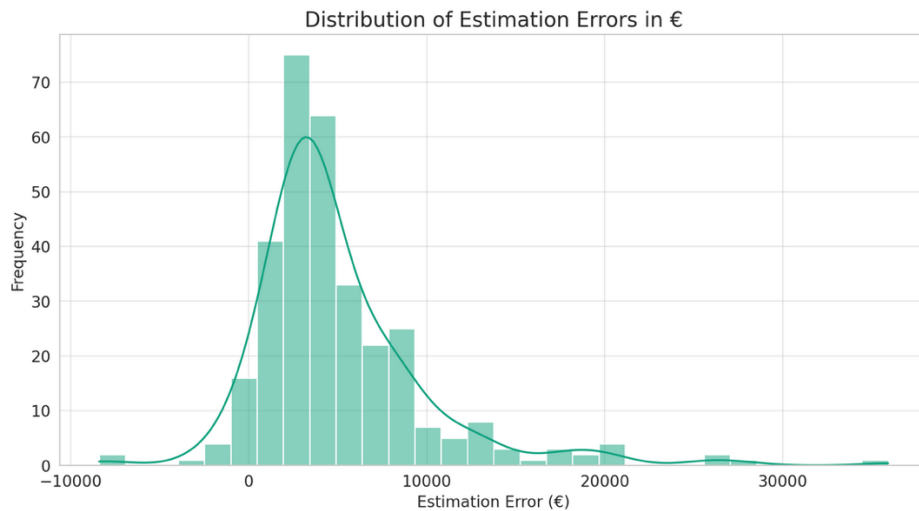
Figure 3: Distribution of Estimation Errors (€)
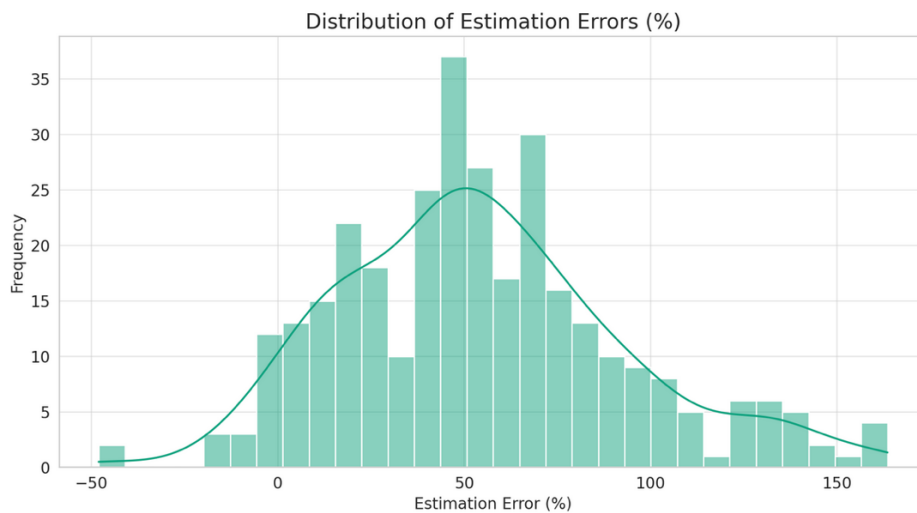
Figure 4: Distribution of Estimation Errors (%)

The estimation error distributions show how actual selling prices differ from average estimates, both in terms of euros and percentage.

The first distribution (Figure 3) illustrates the estimation error in euros, highlighting that most sales are concentrated around zero, but with significant variations, including both underestimations and overestimations.

The second distribution (Figure 4), which expresses the error in percentage, helps to better understand the magnitude of these differences relative to the estimated price.

The presence of significant estimation errors, both positive and negative, reveals cases where the final sale value has deviated markedly from expectations. Specifically, we identified estimation errors ranging from a maximum undervaluation of €5,000 to an overestimation of €3,000 relative to the average estimate, with some items exceeding the sale expectations by 75% and others not reaching the estimated value by up to 50%.

Table 3 presents the distribution of the sizes of Birkin bags that found buyers in various auctions conducted between 2012 and 2024:

Table 3: The Distribution of the sizes

Year	25 cm	30 cm	35 cm	40 cm	Total Birkin
2012	5	14	36	8	63
2013	5	8	36	12	61
2014	1	9	29	5	44
2017	2	5	7	1	15
2018	5	10	18	3	36
2020	2	4	11	1	18
2021	1	2	11	0	14
2022	4	10	26	3	43
2023	0	8	5	1	14
2024	2	4	5	1	12
Total Birkin	27	74	184	35	320

Source: own analysis on Artcurial data

The 25 cm and 30 cm sizes show fluctuating sales, with the 30 cm size experiencing a noticeable decline towards the recent years, which could be attributed to market saturation or shifting consumer tastes.

Interestingly, the 25 cm size, while not the top seller, doesn't show as sharp a decrease in sales, which might indicate a steady niche demand. This size, also known as the Baby Birkin, has become increasingly popular, especially in Asian markets and among enthusiasts of "mini bags". It's seen as an elegant option for special occasions due to its size that comfortably holds essentials without being cumbersome.[15]

The data from secondary market sources adds further context, highlighting that while the Birkin 25 might not lead in sales volume, it commands high prices on the resale market, reflecting its

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[15] PurseBop, 'Hermes Birkin Size Comparison,' PurseBop, accessed January 18, 2024, https://www.pursebop.com/hermes-birkin-size-comparison/.

desirability among collectors. Exotic materials, limited editions, and particular colours can all influence demand and resale value.[16]
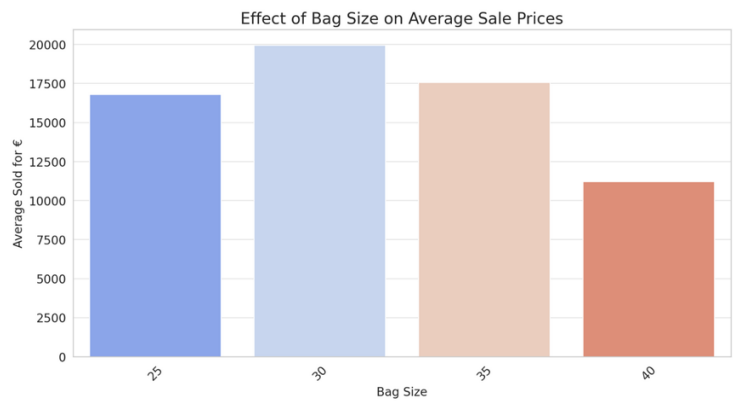
Figure 5: Effect of Bag Size on Average Sale Price

Given the multitude of colours of the bags (128 different colours and styles), it was decided to divide the Birkin bag colours into 5 different groups (Table 4):

Table 4: Group Bags Colours

Group Color	Number of bag
Cool	20
Neutral	4
Other	39
Vibrant/Unique	45
Warm	20
Total	**128**

The analysis of selling prices by colour category (Figure 6) highlighted significant differences between the categories, with some exhibiting a wide range of selling prices. These variations suggest that the colour of an item can play a critical role in determining its market value.

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[16] Lucy Bishop, "The Most Sought After Birkin: The Birkin 25," Sotheby's, accessed January 19, 2024, https://www.sothebys.com/en/articles/the-most-sought-after-birkin-the-birkin-25.
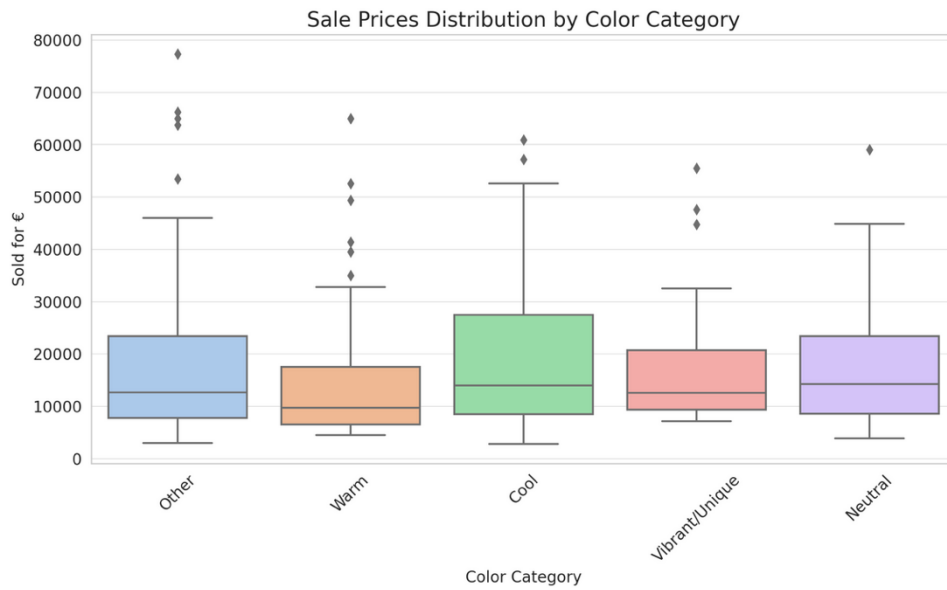
Figure 6: Sales Prices Distribution by Colour Group

Rare or particularly desirable colours can command premium prices, reflecting consumer preferences and perceptions of rarity or exclusivity. Understanding these dynamics can assist sellers and market analysts in identifying which colours or shades may attract greater interest or justify higher valuations.

4.2 Analysis of the Birkin's Bag

This section will conduct a detailed analysis of the returns derived from the sale of bags at auction, with the aim of providing an in-depth view of the performance of this particular luxury goods segment as an investment class. Subsequently, an analysis of the Birkin bag's appreciation over time will be presented.

4.2.1 Analysis of Returns on Bags Sold at Auction

Looking at Table 5, we can see how the average annual returns vary significantly from one year to another, suggesting a potential correlation between the release year of the Birkin bag and its value on the secondary market:

Table 5: Average Annual return Calculations

Year of release	Number of sets	Average_return (%)	Cross sectional SD of returns (%)
2022	2	13,16	25,55
2020	1	25,73	n/a
2019	1	53,85	n/a
2018	3	6,65	13,38
2017	9	52,04	18,71
2016	3	68,60	3,45
2015	7	5,62	13,97
2014	10	6,42	32,85
2013	16	42,36	34,91
2012	33	44,25	43,93
2011	35	5,24	42,42
2010	21	58,35	39,49
2009	19	58,44	36,05
2008	18	55,95	40,82
2007	27	6,49	36,69
2006	20	76,92	39,56
2005	22	53,38	38,45
2004	9	43,18	28,33
2003	11	55,18	48,53
2002	2	32,06	23,35
2001	8	47,07	38,44
2000	9	41,43	31,65
1999	6	59,66	46,63
1998	9	56,51	47,48
1997	5	55,80	12,01
1996	5	5,13	46,44
1995	3	55,12	32,36
1994	2	25,38	17,14
1993	3	28,72	33,52
Total	320		
Min		13,16	
Average		51,26	
Max		79,31	
SD		15,08	
Skewness		-0,60	

Source: own analysis on Artcurial data

With 320 sets recorded, an average annual return of 51.26% is observed. However, this average value masks the wide range of returns observed, from a minimum of 13.16% to a maximum of 79.31%, reflecting the heterogeneity of the market for collectible luxury bags.

The average standard deviation of returns, at 15.08%, suggests that while many purchases have yielded returns close to the average, there have also been cases of significantly higher or lower returns. This variability is partly explained by the nature of the product: luxury bags that can vary greatly in terms of design, material, rarity, and desirability over time.

Furthermore, the presence of missing values in the column "Cross-sectional SD of returns" indicates years when there was only one set sold, making it impossible to calculate a standard deviation for those years. This situation raises important questions about the breadth and depth of the market in certain periods and how the exclusivity of some items may limit the ability to analyse market trends.

The negative skewness of -0.60 suggests that there are more returns deviating below the average rather than above, indicating that investments in this sector can entail significant risks. Investors might find years of greater stability in returns alternated with periods of increased uncertainty.

The overall statistics at the bottom of the table show a wide range in annual returns (-53.61% to 613.28%), reflecting both significant earning opportunities and risks of loss. This emphasizes the importance of careful evaluation and expertise in the field to invest knowledgeably. Investing in collectible bags can be likened to an art rather than an exact science, requiring a deep understanding of the market and its drivers.

Therefore, the auction market for luxury bags presents itself as an interesting field, with the possibility of achieving high returns, but not without a considerable dose of risk and uncertainty. Investors must rely on a deep understanding of the market, careful selection of pieces, and consider their purchasing decisions within the context of a diversified and long-term investment strategy.

4.2.2 Analysis of the Birkin's appreciation over time

Focusing on the comparison between actual selling prices and pre-auction maximum estimates of the items under consideration and taking into account the maximum estimate for the items, as indicated in Table 6, the average cost of an item stands at 17,971.56 euros.

The average auction selling price turned out to be uniform across the different scenarios analysed. The net present value, calculated based on the maximum estimate, amounts to 3,303.24 euros, with an average discrepancy relative to the expected resale price hovering around 23.49%, as illustrated in Table 6.

Table 6: Average prices calculations

Scenario	Average Estimated Price	Average Reselling Price	Average NPV	Average Difference %
Lowest Estimated Price	10.536,88 €	17.371,56 €	6.834,68 €	64,86%
Average Estimated Price	12.302,10 €	17.371,56 €	5.069,46 €	41,21%
Highest Estimated Price	14.067,32 €	17.371,56 €	3.304,24 €	23,49%

Source: own analysis on Artcurial data

This finding highlights a recurring trend of items achieving selling prices that exceed initial forecasts, indicating a favourable trend for the auction house both from a profit and image standpoint. The approach of examining sales estimates from a balanced perspective, avoiding reliance solely on estimated minimum or maximum values, has allowed for a more accurate and less distorted view of market behaviour, highlighting how, on average, items tend to surpass the pre-auction valuations.

The adoption of this methodology not only ensures greater transparency and robustness in the analysis but also helps to increase stakeholder confidence in prospective valuations and the marketing strategies adopted by the auction house.

Table 7: Avrage rate of Appreciation Calculations

Manufacturing Year Group	Number of Items	Average Age of an Item	Average Rate of Appreciation (%)
< 2000	34	28	41,77 %
2000-2005	61	21	36,90 %
2006-2010	105	16	47,74 %
2011-2015	101	12	37,36 %
2016-2020	17	7	48,74 %
2021-2024	2	2	15,16 %

Source: own analysis on Artcurial data

The examination of information related to the appreciation of objects based on the year of production has revealed significant trends regarding the relationship between an item's age and its average rate of appreciation. These items have been classified into six categories (represented in Table 7) based on the year of manufacture, spanning from the years before 2000 to the 2021-2024 period:

- Items manufactured before **2000**, with an average age of 27.8 years, showed a robust appreciation rate of **41.77%.**

- Items produced between **2000 and 2005**, with an average age of approximately 20.9 years, showed an average appreciation rate of **36.90%**.

- The **2006-2010 group**, with an average age of approximately 16.1 years, displayed a higher appreciation rate of **47.74%.**

- Items manufactured between **2011 and 2015**, with an average age of 11.8 years, recorded an appreciation rate of **37.36%.**

- Notably, items produced more recently, between **2016 and 2020**, despite an average age of only 6.7 years, revealed the highest appreciation rate, at **48.74%.**

- Finally, the **2021-2024 group**, with an average age of 2 years, showed a significantly lower appreciation rate of **15.16%**, suggesting that appreciation might increase over time.

These results highlight that, although there is a general tendency for goods to increase in value over time, the relationship between an item's age and its appreciation rate does not manifest through a linear correlation. Particularly, items of intermediate age (between 6 and 16 years) seem to register exceptionally high appreciation rates, suggesting that additional factors to age,

such as rarity, market demand, and global economic conditions, may exert a decisive influence on the appreciation of items over time.

4.3 Hermes Birkin vs. The different asset classes: comparison of performance and investment simulation

This section establishes the basis for evaluating the viability of luxury bags as alternative investments by comparing them against traditional asset classes. It acknowledges the complexity of factors influencing the luxury market, including brand heritage, product scarcity, and consumer demand dynamics, setting the stage for a nuanced analysis of investment potential in the luxury sector.

This exclusivity translates into significant resilience against economic fluctuations, as will be demonstrated by the impressive performance in 2008, a catastrophic year for many financial markets.

Moreover, Birkin bags are often perceived not just as fashion accessories but as true works of art that combine quality craftsmanship and iconic design. Their value is bolstered by the Hermès brand history and its association with status and prestige in the world of fashion and luxury.

4.3.1 Data Sources

The accuracy and reliability of data sources are fundamental elements in the context of any academic research or financial analysis. Indeed, the choice of sources not only determines the validity of the obtained results but also directly affects the interpretation and final conclusions of the research work. We identify the sources from which annual data related to the prices of Hermès bags, the S&P 500 index, gold prices, annual inflation, 3-month T-notes, and the real estate sector were extracted:

- **Hermès Bag Prices**: Data collected from Artcurial, an auction site specializing in luxury items, ensuring updated data reflecting real market values.
- **S&P 500** Index and **Gold Prices**: Information obtained through the Bloomberg Terminal, which offers real-time access to financial data and market analysis, ensuring accuracy and global representativeness.

- **Annual Inflation** and **3-Month T-Notes**: Data sourced from the Federal Reserve of St. Louis (FRED), a primary source of economic and financial data.
- **Real Estate Sector**: Data gathered from the Yale database, curated by Yale University, known for its reliability and insights into the real estate sector, allowing for an accurate analysis of market trends.

4.3.2 Result of the comparison Birkin vs different asset class

Table 8 compares the annual return of various types of investments between 1998 and 2023, highlighting interesting data, especially regarding investments in Hermès Birkin bags compared to traditional assets such as the S&P 500, gold, T-Notes, and the real estate sector.

This comparison underscores the unique investment profile of Birkin bags, illustrating their potential as a hedge against market volatility and their ability to maintain or even increase in value over time. Despite their high entry price and the market's liquidity constraints, Birkin's have shown an exceptional ability to outperform traditional investment vehicles in certain periods, reflecting both the tangible and intangible values that collectors and investors place on these luxury goods.

Such analysis reveals the nuanced dynamics of the luxury market and the potential of high-end collectibles as alternative investments, suggesting that their value is not only in their aesthetic appeal or utility as fashion items but also in their investment potential over time.

Table 8: A comparison of investments

Investment Type (1998- 2023)	Lowest Annual Return	Average Annual Return	Highest Annual Return	SD
S&P 500 (Nominal Return)	-36,55%	9,83%	32,15%	17,99%
S&P 500 (Real Return)	-36,54%	7,13%	30,18%	17,57%
Gold	-27,61%	8,78%	31,92%	14,04%
T-Note	-17,83%	3,78%	20,10%	9,20%
Real Estate	-12,00%	5,22%	18,87%	6,86%
Hermes - Birkin	**5,24%**	**40,36%**	**76,92%**	**22,20%**

Source: own analysis on Artcurial data

Looking at Table 8, Hermès Birkin bags stand out for their minimum annual return of 5.24%, significantly higher than any other investment listed, highlighting the exceptional resilience of this asset over the years. With an average return of 40.36% and a peak of 76.92%, Birkin's have proven to be an extremely fruitful investment, surpassing other investments listed in terms of both average and maximum returns.

The volatility of Birkin's, as indicated by a standard deviation (SD) of 22.20%, is comparable to that of the S&P 500 stock indices and higher than that of gold, T-Notes, and the real estate sector. This suggests that, despite the high returns, investments in Birkin's carry a non-negligible degree of risk, as is typical for alternative investments with high return potential.

The high average value and low minimum value of Birkin's may reflect sustained demand growth and a robust secondary market, elements that, along with limited availability, have contributed to supporting and increasing the value of these goods over time.

Table 9 provides a detailed comparative analysis of the annual returns of various investment instruments in the period 1999-2022, offering a multidimensional representation of performance across diversified economic cycles. Specifically, the return of luxury goods represented by the Birkin Return, stock indices such as the S&P 500 (both nominal and real), the precious metal gold, T-Notes as representatives of short-term government debt securities, and finally the real estate sector are analysed.

Investments in Hermès Birkin bags, as highlighted by Table 9, represent an intriguing case study in the context of alternative investments. With an average annual return of 39.65% and peak returns of up to 76.92%, Birkin's have not only surpassed many traditional assets in the considered period but also demonstrated exceptional resilience during periods of economic volatility.

Regarding stock indices, the S&P 500 in nominal and real terms shows the resilience and growth potential of the stock market, despite significant fluctuations due to events like the 2008 financial crisis. Notably, the index in real terms adjusts for inflation, offering a more accurate view of the actual purchasing power of investments.

Gold, traditionally seen as a safe haven, had an average yield of 9.54%, marking significant increases during periods of economic turmoil, suggesting its role as a hedge against market uncertainty and inflation.

T-Notes (3 months), although offering lower average returns (4.13%), are confirmed as one of the most stable and predictable instruments, highlighting their role as defensive assets in an investor's portfolio.

Table 9: A comparative analysis of the annual returns (%)

	Annual returns on Investments in					
Year	Birkin Return	S&P 500 (nominal)	S&P 500 (real)	Gold	T-Note	Real Estate
1999	59,66%	20,89%	17,73%	0,85%	-8,25%	7,68%
2000	41,43%	-9,03%	-12,05%	-5,44%	16,66%	9,29%
2001	47,07%	-11,85%	-13,24%	0,75%	5,57%	6,68%
2002	32,06%	-21,97%	-23,85%	25,57%	15,12%	9,56%
2003	55,18%	28,36%	25,80%	19,89%	0,38%	9,81%
2004	43,18%	10,74%	7,16%	4,65%	4,49%	13,64%
2005	53,38%	4,83%	1,45%	17,77%	2,87%	13,51%
2006	76,92%	15,61%	12,77%	23,20%	1,96%	1,73%
2007	6,49%	5,48%	1,32%	31,92%	10,21%	-5,40%
2008	55,95%	-36,55%	-36,54%	4,32%	20,10%	-12,00%
2009	58,44%	25,94%	22,49%	25,04%	-11,12%	-3,86%
2010	58,35%	14,82%	13,19%	29,24%	8,46%	-4,11%
2011	5,24%	2,10%	-0,94%	12,02%	16,04%	-3,89%
2012	44,25%	15,89%	13,89%	5,68%	2,97%	6,44%
2013	42,36%	32,15%	30,18%	-27,61%	-9,10%	10,71%
2014	6,42%	13,52%	12,79%	0,12%	10,75%	4,51%
2015	5,62%	1,38%	0,74%	-12,11%	1,28%	5,20%
2016	68,60%	11,77%	9,53%	8,10%	0,69%	5,30%
2017	52,04%	21,61%	19,07%	12,66%	2,80%	6,21%
2018	6,65%	-4,23%	-6,11%	-0,93%	-0,02%	4,52%
2019	53,85%	31,21%	28,24%	19,08%	9,64%	3,69%
2020	25,73%	18,02%	16,48%	24,17%	11,33%	10,43%
2022	13,16%	-18,04%	-23,00%	0,55%	-17,83%	5,67%
Lower	5,24%	-36,55%	-36,54%	-27,61%	-17,83%	-12,00%
Average	39,65%	7,51%	5,09%	9,54%	4,13%	4,58%
Highest	76,92%	32,15%	30,18%	31,92%	20,10%	13,64%
SD	22,43%	17,85%	17,66%	14,53%	9,44%	6,51%

Source: own analysis on Artcurial data

Finally, the real estate sector displays a more modest performance with an average of 4.58%, indicating steady but slower growth compared to other investment categories. However, significant volatility is observed here as well, with a notable drop in 2008 corresponding to the subprime mortgage crisis.

The analysis of Table 10, which shows the value of $1,000 invested at the beginning of 1999 in various investment instruments, reflects the remarkable potential of Birkin bags as an alternative investment. The value in each subsequent year is calculated by taking the previous year's value and multiplying it by 1+ the return rate for that year, demonstrating the effect of compound interest.

Observing the growth in the value of the initial investment in Birkin Return compared to other traditional assets, we can see that the Birkin bag has had an exceptional performance, with the value reaching $1,601,502.05 by 2022. This represents significant growth and highlights the potential of non-traditional luxury goods in the investment realm.

Table 10: comparative analysis of the annual returns (in €)

Year	Birkin Return	S&P 500 (nominal)	S&P 500 (real)	Gold	T-Note	Real Estate
		Value of $1000 invested at start of 1999 in				
1999	$ 1.596,59	$ 1.208,85	$ 1.177,34	$ 1.008,51	$ 917,46	$ 1.076,80
2000	$ 2.258,10	$ 1.099,67	$ 1.035,43	$ 953,61	$ 1.070,26	$ 1.176,86
2001	$ 3.321,09	$ 969,36	$ 898,33	$ 960,74	$ 1.129,90	$ 1.255,45
2002	$ 4.385,95	$ 756,43	$ 684,03	$ 1.206,39	$ 1.300,70	$ 1.375,47
2003	$ 6.806,31	$ 970,93	$ 860,49	$ 1.446,32	$ 1.305,58	$ 1.510,43
2004	$ 9.745,01	$ 1.075,23	$ 922,11	$ 1.513,55	$ 1.364,21	$ 1.716,43
2005	$ 14.946,44	$ 1.127,21	$ 935,45	$ 1.782,49	$ 1.403,33	$ 1.948,32
2006	$ 26.442,57	$ 1.303,20	$ 1.054,88	$ 2.195,97	$ 1.430,85	$ 1.982,10
2007	$ 28.158,94	$ 1.374,67	$ 1.068,82	$ 2.896,98	$ 1.576,94	$ 1.875,10
2008	$ 43.913,32	$ 872,20	$ 678,29	$ 3.022,06	$ 1.893,92	$ 1.650,17
2009	$ 69.575,62	$ 1.098,41	$ 830,83	$ 3.778,67	$ 1.683,38	$ 1.586,55
2010	$ 110.174,11	$ 1.261,20	$ 940,44	$ 4.883,60	$ 1.825,85	$ 1.521,30
2011	$ 115.941,81	$ 1.287,67	$ 931,65	$ 5.470,81	$ 2.118,63	$ 1.462,19
2012	$ 167.251,75	$ 1.492,28	$ 1.061,03	$ 5.781,79	$ 2.181,58	$ 1.556,32
2013	$ 238.102,07	$ 1.971,98	$ 1.381,20	$ 4.185,20	$ 1.982,96	$ 1.723,05
2014	$ 253.400,04	$ 2.238,68	$ 1.557,82	$ 4.190,41	$ 2.196,05	$ 1.800,71
2015	$ 267.632,21	$ 2.269,55	$ 1.569,28	$ 3.683,11	$ 2.224,25	$ 1.894,34
2016	$ 451.219,83	$ 2.536,74	$ 1.718,78	$ 3.981,58	$ 2.239,61	$ 1.994,83
2017	$ 686.045,86	$ 3.084,82	$ 2.046,55	$ 4.485,75	$ 2.302,36	$ 2.118,65
2018	$ 731.640,08	$ 2.954,43	$ 1.921,56	$ 4.444,06	$ 2.301,98	$ 2.214,39
2019	$ 1.125.600,13	$ 3.876,55	$ 2.464,29	$ 5.291,87	$ 2.523,79	$ 2.296,01
2020	$ 1.415.254,55	$ 4.575,23	$ 2.870,49	$ 6.570,88	$ 2.809,78	$ 2.535,54
2022	$ 1.601.502,05	$ 3.749,98	$ 2.210,27	$ 6.606,98	$ 2.308,85	$ 2.679,24
Lower	$ 1.596,59	$ 756,43	$ 678,29	$ 953,61	$ 917,46	$ 1.076,80
Average	$ 320.648,45	$ 1.876,32	$ 1.339,97	$ 3.493,10	$ 1.830,10	$ 1.780,45
Highest	$ 1.601.502,05	$ 4.575,23	$ 2.870,49	$ 6.606,98	$ 2.809,78	$ 2.679,24

Source: own analysis on Artcurial data

Compared to more conventional investments like the S&P 500, both nominal and real, gold, T-Notes, and the real estate sector, Birkin's have not only shown a much higher average return but also a maximum value that eclipses all other considered investments. The minimum value recorded for the investment in Birkin's since 1999 is still above the initial value, which suggests a considerable robustness of such an investment.

These data can be interpreted as evidence of the potential of luxury bags as alternative investment assets, especially regarding value appreciation over time. The performance of Birkin's in this context can be seen as the result of a unique combination of factors such as exclusivity, global desirability, and extremely limited production, which together contribute to their valuation as collectible goods.

CHAPTER 5

EMPIRICAL ANALYSIS: THE POWER OF THE BIRKING BAG

5.1 Introduction

In the dynamic landscape of luxury goods, the Hermès bag stands out as a symbol of elegance, craftsmanship, and enduring value. This chapter delves into the creation of an innovative Hermès Bag Index and performs a comprehensive empirical analysis using the Hedonic regression model to examine the multifaceted nature of auction prices for these coveted items.

The objective of this chapter is twofold: firstly, to construct a Hermès Bag Index that captures the fluctuations and trends in investment quality over time, providing a barometer for the market's performance. Secondly, to employ a hedonic regression model that will allow for an intricate analysis of how various attributes contribute to the final auction prices of Hermès bags, thereby unveiling the implicit valuations of their characteristics.

We begin by laying the groundwork for the Hermès Bag Index, which harnesses auction data to develop a nuanced measure of value over multiple years. Following this, the study progresses to a detailed empirical analysis, where the hedonic regression model is utilized to find the influence of characteristics such as colour, size, material, and year of production on the bags' market prices.

The implications of this analysis are profound for both market participants and observers. For investors and collectors, the index provides a vital tool for informed decision-making, while for scholars and industry analysts, the hedonic model offers an empirical basis for exploring the intrinsic and extrinsic factors that drive luxury asset prices.

As we navigate through this chapter, we will uncover the layers that constitute the value of Hermès bags and explore the robustness of these items as alternative investments. The findings will contribute significantly to the discourse on luxury goods as financial assets and provide a scaffold upon which future research may build.

5.2 Data Sources

As delineated in Section <u>4.1 Summary Statistics</u> the endeavour to analyse the price dynamics of the iconic Hermès Birkin bags is complex and multi-layered. A notable hurdle in this endeavour has been the lack of an official historical record of retail prices for these bags, compounded by the scarcity of detailed annual data on specific models across digital platforms and specialized blogs. Such gaps pose challenges in applying traditional linear regression analyses to understand pricing over the previous two decades.

Despite these challenges, a thorough and resourceful approach to data collection has enabled the surmounting of these barriers. The primary source of data has been Artcurial, an eminent Parisian auction house renowned for its expertise in orchestrating voluntary sales of a diverse array of high-value items, including the much-sought-after Hermès Birkin bags.

The dataset underpinning this analysis was meticulously compiled from ten auctions facilitated by Artcurial, covering a total of 320 Birkin bags successfully auctioned. This dataset is not merely a record of sale prices but a rich repository of information, incorporating Artcurial's pre-auction estimates, which provides insight into the expected market valuation. Each bag's record is comprehensive, detailing the model's name, date of auction, unique identification code, size, colour, and year of production, thereby laying a robust foundation for the empirical analyses that follow.

The dataset consists of meticulously curated auction records, each of which details the following variables:

- **Auction ID (Auction_ID)**: A unique identifier allocated to the auction event, which allows for the detailed tracking and differentiation of sales within the dataset.
- **Year of Bag (Year_Bag)**: The production year of the Hermès bag, a vital factor that can influence its collectability and market price due to style and rarity associated with certain production years.
- **Name of Bag (Name_Bag)**: Refers to the model's name of the Hermès bag, which includes the design and size specifications, essential for categorizing the item.
- **Size of Bag (Size_Bag)**: Measured in centimetres, it represents the physical dimensions of the bag, directly impacting its functionality, style, and consequently, its valuation.

- **Colour of Bag (Color_Bag)**: Describes the bag's colour, capturing the aesthetic element that plays a critical role in fashion and buyer preference.
- **Minimum Price (Minimum_Price)**: The lowest estimated value set by Artcurial before the auction, indicative of the expected market base value of the bag.
- **Maximum Price (Maximum_Price)**: The highest pre-auction estimate provided by Artcurial, projecting the upper limit of the bag's market value as anticipated by the experts.
- **Average Price (Average_Price)**: A mean value computed from the minimum and maximum estimates, offering a centralized figure that encapsulates the expected valuation before the auction.
- **Sold Price (Sold_price)**: The actual price that the bag fetched at auction, providing an accurate measure of the market value as determined by real-time bidding dynamics.
- **Natural Log of Price (Ln_Price)**: The natural logarithm of the sold price, used in statistical models to normalize price data, reduce skewness, and stabilize variance across the data set.
- **Natural Log of Size (Ln_Size)**: The natural logarithm of the size of the bag, applied in modelling to address non-linear effects of size on the bag's price, ensuring a proportional analysis of this attribute.

As part of the preparation for the Hedonic regression analysis, we have constructed a series of dummy variables to isolate and assess the impact of specific attributes on the Hermès bags' final auction prices.

- **Size Dummy Variables**: To capture the effect of different sizes on the pricing, dummy variables were created for the commonly recognized sizes of Hermès bags, namely 25 cm, 30 cm, 35 cm, and 40 cm. Each size category has its own dummy variable, enabling the model to differentiate the price premium associated with each size.
- **Year Dummy Variables**: Given the temporal fluctuations in luxury goods' values, a set of dummy variables for each year of auction has been generated. This allows the model to control for year-specific effects that might affect the bags' value, including economic trends, brand popularity, and design preferences specific to a particular year.
- **Colour Dummy Variables**: The rich variety of colours in which Hermès bags are offered can significantly sway buyer interest and thus the price. For this reason, individual dummy variables have been established for each colour available in the

dataset. These colour dummies enable the analysis to quantify the additional value that certain colours may command in the marketplace.

5.3 The Hermes Bag Index

The primary objective of this analysis is to develop a comprehensive Hermès Bag Index that reflects the investment quality and price trajectory of Hermès bags over time. This index serves as a quantitative measure to gauge market trends and assess the intrinsic value of these luxury assets within the secondary market, particularly auctions.

To construct this index, a regression analysis was employed, with the natural logarithm of the sold price (Ln_Price) as the dependent variable. This approach is chosen due to its effectiveness in normalizing data, thus reducing the influence of extreme outliers, and improving the distribution of residuals.

The independent variables comprise the natural logarithm of the bag's size (Ln_Size), which accounts for the size premium effect in pricing, and a series of dummy variables representing the year of auction (Y1993 to Y2022). These dummy variables (Year Dummy Variables) capture temporal trends and potential year-specific effects on the value of the bags, excluding external factors unrelated to the intrinsic value of the Hermès bags themselves.
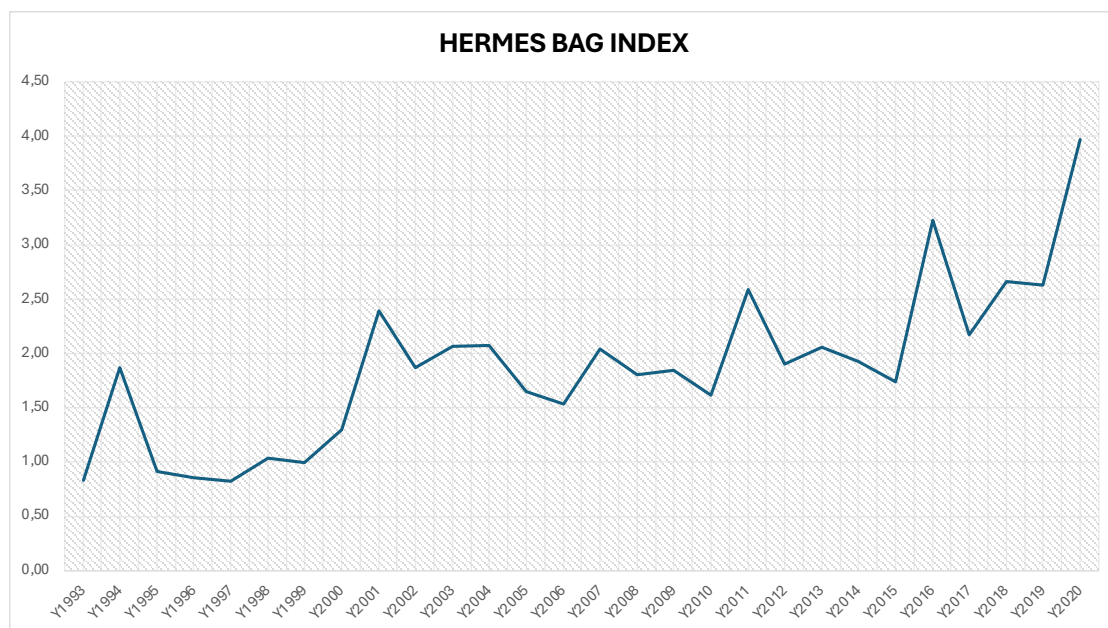

Figure 7: Hermes Bag Index

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The resultant index values for each year (squared coefficients of the year dummy variables) delineate a clear pattern of growth and fluctuation in the Hermès bag market. For instance, significant index values were observed for the years 2016 (**3.2284**), 2018 (**2.6618**), 2019 (**2.6300**), 2020 (**3.9670**), and 2022 (**3.2838**), which could be indicative of marked increases in market valuation for Hermès bags in these years.

Conversely, lower index values, such as those in the mid-1990s and early 2000s, suggest periods of relative stability or less aggressive growth in the auction prices for Hermès bags. It is important to note that while some years show a negative coefficient, the squaring of these coefficients transforms them into positive index values, which still allows for comparative analysis across years.

5.4 Empirical Analysis

5.4.1 Methodology

To study the factors influencing the auction price of Hermès Birkin bags, a Hedonic Regression model has been utilized. The aim is to gain a clear understanding of how factors such as the bag's size, colour, type, and production year can influence both the average price of the bag and the actual auction sale price.

Hedonic regression models are a cornerstone of empirical analysis in economics, particularly when studying markets for differentiated goods and services where pricing is influenced by the characteristics or attributes of the products being sold. At its core, a hedonic regression seeks to decompose the item price into the implicit prices of its attributes. This approach allows researchers and analysts to estimate the contributing value of each characteristic to the overall price, providing insights into consumer preferences and the value structure of the market.

The fundamental premise of the hedonic price model is that a product is not a homogeneous entity but a bundle of attributes that contribute to its overall utility and, consequently, to its price. These attributes could range widely, including physical characteristics, location advantages, brand strength, or even temporal factors. The model thus takes the form of a multi-variable regression analysis, with the price of the product (often transformed logarithmically to

correct for non-linearity and heteroscedasticity issues) as the dependent variable and the various product attributes as independent variables.

To provide a comprehensive analysis, this section will undertake three distinct Hedonic Regression analyses. Each analysis focuses on a specific set of attributes as independent variables:

- The first regression will examine the influence of the bag's size, operationalized through dummy variables representing different size categories.
- The second regression will explore the effect of the production year, utilizing dummy variables for various years to capture temporal value variations.
- Lastly, the third regression will assess the impact of colour, again employing dummy variables to represent the spectrum of colours available for Hermès Birkin bags.

Through these analyses, the research aims to offer an in-depth exploration of how each attribute category - size, production year, and colour - affects the auction prices of Hermès Birkin bags, providing valuable insights into market dynamics and consumer valuation of luxury goods.

5.4.2 Model

The general equation of the Hedonic Regression model can be expressed as follows:

$$\ln(Y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon$$

where:

- Ln(Y) denotes the natural logarithm of the price of the product, transforming the model into a multiplicative form which is often more suitable for economic data.

- $X_1, X_2, \ldots, X_n$ represent the attributes or characteristics of the product, each potentially influencing the price in a unique manner. These variables can be quantitative or qualitative (with qualitative attributes typically encoded as dummy variables).

- β_0 is the intercept term, indicating the baseline price when all other attributes are absent or at their reference level.

- $\beta_1, \beta_2, \ldots, \beta_n$ are the coefficients for each attribute, quantifying the effect of a one-unit change in the attribute on the logarithm of the price. In the case of dummy variables, they represent the price difference associated with the presence of that attribute.

- ε captures the error term, encompassing all other factors affecting the price not explicitly included in the model.

5.4.3 Model Results

Data analysis for the three hedonic regressions were conducted using the initially described dataset, regarding the sale prices of Hermès Birkin bags and their stylistic features. STATA statistical software was used for the analysis.

5.4.3.1 Hedonic Regression Results (Bag Size)

Table 11: Hedonic Regression Results (Bag Size)

Hedonic Regression (1)		
Ln_Price	Coeff.	
Ln_Size	0,8223	***
Size_25	2,4351	***
Size_30	0,9141	***
Size_35	0,5664	
Size_40	-0,7014	***
Constant	0,8223	***
R - squared	0,1538	
Obserbations	320	
Dummies?	yes	

5.4.3.2 Year Hedonic Regression Results (Year Bag Production)

Table 12: Hedonic Regression Results (Year Bag Production)

Hedonic Regression (2)		
Ln_Price	Coeff.	
Y1993	-0,2530	***
Y1994	0,5820	
Y1995	-0,1480	**
Y1996	-0,2120	
Y1997	-0,2550	*
Y1998	-0,0160	*
Y1999	-0,0600	
Y2000	0,2120	*
Y2001	0,8330	
Y2002	0,6020	*
Y2003	0,6850	
Y2004	0,6970	*
Y2005	0,4600	**
Y2006	0,3920	
Y2007	0,6880	**
Y2008	0,5510	
Y2009	0,5730	*
Y2010	0,4420	

Y2011	0,9130	***
Y2012	0,6020	***
Y2013	0,6760	**
Y2014	0,6170	**
Y2015	0,5170	**
Y2016	1,1480	*
Y2017	0,7290	**
Y2018	0,9710	*
Y2019	0,9420	**
Y2020	1,3530	**
Y2022	1,1640	**
Constant	8,9620	***
R - squared	0,1810	
Obserbations	320	
Dummies?	yes	

5.4.3.3 Hedonic Regression Results (Bag Colour)

Table 13: Hedonic Regression Results (Colour Bag)

Hedonic Regression (3)

Ln_Price	Coeff.	
Colour_Gold	0,162	
Colour_Courchevel Bleu Jean	0,182	**
Colour_Clémence Étoupe	0,342	
Colour_Rose Shocking	0,336	
Colour_Crocodile Amethyst	2,041	***
Colour_Bleu Jean	0,726	
Colour_Violet Iris	1,139	
Colour_Autruche Vert Anis	1,099	**
Colour_Clémence Blanc	0,405	
Colour_Violet	0,479	
Colour_Crocodile Marron Mat	1,817	**
Colour_Courchevel Gold	0,18	
Colour_Togo Kaki	0,811	
Colour_Black	0,996	*
Colour_Lézard Ombré	1,872	**
Colour_Grainé Gold	0,278	
Colour_Togo Noir	0,205	
Colour_Tadelack Gold	0,613	
Colour_Beige	0,708	

Colour_Crocodile Bleu Jean	2,439	***
Colour_Crocodile Rouge Braise	2,181	***
Colour_Autruche Cognac	1,476	*
Colour_Caramel	0,56	
Colour_Rose Jaipur	1,179	
Colour_Crocodile Havane Mat	2,015	**
Colour_Crocodile Bleu Électrique	2,015	**
Colour_Crocodile Anthracite Mate	1,609	*
Colour_Crocodile Marine Et Bleu	2,164	**
Colour_Crocodile Noir	1,667	**
Colour_Crocodile Améthyste Mat	2,164	**
Colour_Balck	1,558	*
Colour_Crocodile Rose Schocking	2,164	**
Colour_Blanc	0,7	
Colour_Autruche Chestnut	0,916	
Colour_Clémence	1,504	*
Colour_Rouge Casaque	1,344	*
Colour_Autruche Rouge	1,253	
Colour_Togo Blanc	0,118	
Colour_Grainé Étoupe	0,319	
Colour_Vert Olive	0,336	
Colour_Crocodile Chocolat Mat	2,341	***
Colour_Togo Curry	0,405	
Colour_Grainé Marine	0,578	
Colour_Togo Gold	0,372	
Colour_Togo Étoupe	0,627	
Colour_Porosus Cognac	1,705	**
Colour_Ardennes Marron	0,228	
Colour_Crocodile Gris Éléphant	2,077	**
Colour_Courchevel Marron	0,742	
Colour_Étoupe	0,464	
Colour_Gris Graphite	1,881	**
Colour_Chocolat	0,336	
Colour_Marine	0,247	
Colour_Box Rouge	0,415	
Colour_Bleu Indigo	0,328	**
Colour_Courchevel Rouge	0,638	
Colour_Bicolore Bleu Mykonos Et Blanc	0,638	
Colour_Togo Marine	0,569	
Colour_Crocodile Gris Vison	1,919	**
Colour_Crocodile Tricolore	2,516	***
Colour_White	0,718	
Colour_Fjord Blanc	1,357	

Colour_Ghillies Denim	0,763	**
Colour_Ghillies Bicolore	0,926	
Colour_Crocodile Bleu Mykonos	2,324	***
Colour_Alligator Rouge	1,917	**
Colour_Alligator Rose	2,225	***
Colour_Corcodile Noisette	1,188	
Colour_Crocodile Anis	1,714	**
Colour_Himalaya	2,633	***
Colour_Barénia Gold	0,702	
Colour_Ghilles Rubis	0,569	
Colour_Crocodile Brillant Orange	2,536	***
Colour_Crocodile Rose Schocking Brillant	2,378	***
Colour_6 Colors	1,207	*
Colour_Rouge Capucine	1,253	*
Colour_Autruche Bleu	1,108	
Colour_Bleu	1,262	
Colour_Kaki	0,009	
Colour_Autruche Vert	0,982	
Colour_Crocodile Bleu	1,262	***
Colour_Bleu Mykonos	0,874	
Colour_Crocodile Niloticus Gris	1,758	**
Colour_Lézard Vert Olive	1,513	*
Colour_Bordeaux	0,728	
Colour_Alligator Havane	1,843	**
Colour_Crocodile Caramel	1,457	*
Colour_Crocodile Rouge	2,086	**
Colour_Courchevel Bleu	0,233	
Colour_Autruche Parchemin	1,514	*
Colour_Bleu Saphir	1,149	
Colour_Rouge	0,703	
Colour_Tricolor	0,945	
Colour_Améthyste	1,882	**
Colour_Orange	0,838	
Colour_Gris	1,189	
Colour_Prune	0,639	
Colour_Coquille D'Œuf	1,066	**
Colour_Tosca	0,821	
Colour_Bicolore Tosca	1,022	
Colour_Ghillies- Rouge	0,639	
Colour_Box Bleu	0,703	
Colour_Bicolore	1,022	
Colour_Rose Tyrien	1,457	*
Colour_Rose Lipstick	0,664	

Colour_Rose Crevette	0,703	
Colour_Alligator Vert	1,938	**
Colour_Brown	0,696	
Colour_Rose	0,784	
Colour_Red	0,878	
Colour_Blue	1,175	*
Colour_Azure	1,102	*
Colour_Pink	0,887	
Colour_Fuchsia	1,843	**
Colour_Menthe	1,149	
Colour_Green	1,129	*
Colour_Yellow	1,036	
Colour_Grey	0,601	
Colour_Purple	0,573	**
Constant	8,546	***
R - squared	0,5355	
Obserbations	320	
Dummies?	yes	

5.4.3.4 Hedonic Regression Results (Comment)

Hedonic Regression Results (Bag Size)

In our investigation of the impact of bag dimensions on their market prices, presented in Table 11, the hedonic regression model demonstrates modest explanatory power with an R-squared value of 0.052. This outcome suggests that the model's independent variables explain approximately 5.2% of the variability in the natural logarithm of the price (ln_price), indicating a relatively low predictive capability. This observation implies the potential for significant influences from variables not included within the model on the selling price.

The model's analysis reveals a notably positive association between the natural logarithm of size (Ln_Size) and the selling price, with a coefficient of 2.4351 (***). This relationship suggests that an increase in bag size is correlated with an increase in selling price, adjusted for specific sizes through the implementation of dummy variables. The nuances of how bag size impacts selling prices are further elucidated through the behavior of size-specific dummy variables.

For instance, bags of size 25 are associated with significantly higher selling prices compared to the baseline size, as indicated by a positive coefficient of 0.9141 (***). Similarly, size 30 bags also demonstrate a significant positive impact on selling prices, with a coefficient of 0.5663 (***). In contrast, size 35 bags do not exhibit a statistically significant difference in selling prices compared to the baseline size, with a coefficient of 0.0433, indicating no substantial price impact. Notably, size 40 bags are associated with lower selling prices, as evidenced by a negative coefficient of -0.7014 (***).

These findings, as delineated in Table 11, highlight the critical role of bag size in determining selling prices, with the effect varying across different bag sizes. Nonetheless, the model's documentation points towards potential issues such as strong multicollinearity or problems with the design matrix, necessitating further examination to affirm the results' reliability. This analytical exploration into the significance of bag dimensions on their market valuations serves as a foundational reference for understanding price determinants, though within the limited explanatory scope of the current model.

Hedonic Regression Results (Year Production)

In the subsequent exploration of market valuation determinants, we utilize a hedonic regression model, the results of which are compiled in Table 12. This model, designated as "Hedonic Regression (2)," integrates annual variables to assess their impact on the selling prices of items across different years. The R-squared value for this model is reported at 0.181, indicating that the model explains approximately 18.1% of the variability in the dependent variable. This represents a significant improvement in explanatory power compared to the previous model discussed, suggesting that including temporal factors adds substantial value to understanding price variations.

The regression coefficients associated with the year dummies reveal varied effects on selling prices over time. Notably, several years exhibit statistically significant impacts on prices, as highlighted by the star notation. For example, a negative coefficient is observed for the year 1993 (-0.253, ***), indicating lower selling prices relative to the baseline year. Conversely, the year 2001 shows a positive coefficient of 0.833, although it lacks statistical significance under the conventional thresholds. This pattern of fluctuating impacts continues across the years, with

notable peaks in 2016 (1.148, *) and 2020 (1.353, **), suggesting significantly higher selling prices during these periods.

The presence of a constant term (8.962, ***) indicates the baseline price level from which the yearly adjustments are calculated. The incorporation of dummy variables, as confirmed in the model's specification, allows for the isolation of annual effects while controlling for other unspecified factors that might influence selling prices.

This model's findings, detailed in Table 12, underscore the temporal dynamics influencing market prices, with certain years associated with notable deviations from the baseline price level. These temporal effects, captured through year-specific coefficients, offer insights into how external factors, possibly reflecting economic conditions, consumer preferences, or market trends, have influenced selling prices over time.

Hedonic Regression Results (Colour Bag)

In our expanded analysis focusing on the influence of colour on the Birkin bag's market value, delineated in Table 13 under the title "Hedonic Regression (3)," we introduce colour variations as explanatory variables to unravel their impact on selling prices. The model achieves an R-squared value of 0.1538, illustrating that approximately 15.38% of the variability in the bags' selling prices is explained by the colour attributes alone. This analysis underscores the considerable influence of colour on the valuation of luxury items, with certain hues and materials commanding significant premiums.

Our findings indicate that Birkin bags crafted from exotic materials, particularly crocodile, exhibit substantial price increases, as evidenced by their significantly positive coefficients. For example, bags in "Crocodile Amethyst" and "Crocodile Rouge Braise" demonstrate exceptional value, with coefficients of 2.041 (***), and 2.181 (***), respectively, indicating a profound premium attached to these specific colours and materials. Similarly, "Crocodile Bleu Jean" and "Crocodile Noir" bags are highly valued, with coefficients suggesting a significant increase in selling prices, which underscores the desirability and exclusivity associated with exotic materials.

Furthermore, the analysis highlights the distinct appeal of specific colour variants, beyond the exotic material factor. For instance, "Bleu Jean" and "Rose Shocking" exhibit positive impacts on the bags' selling prices, though not as pronounced as the exotic materials, yet indicative of the premium associated with popular and sought-after hues.

It is also noteworthy that while many colours and materials significantly enhance the Birkin bag's market value, the presence of a constant term (8.546, ***) establishes a base price level, from which these colour-specific premiums are calculated. The inclusion of dummy variables enables a comprehensive understanding of how each colour variation, independent of other factors, contributes to the overall market valuation of these luxury items.

The analysis presented in Table 13 reveals the intricate relationship between colour, material, and the Birkin bag's market value. Exotic materials, such as crocodile, alongside certain vibrant and desirable colours, markedly increase the bag's selling price, highlighting the luxury market's valuation of rarity and aesthetic appeal. This model's findings provide a nuanced perspective on the factors influencing luxury item valuations, emphasizing the significant role that colour and material play in determining the market worth of high-end products like the Birkin bag.

6. Conclusion

Integrating the empirical findings from our analysis, along with the insights provided by the Hermès Bag Index and observed market trends between 1998 and 2023, into the overarching narrative of our hedonic regression model analyses, we arrive at a multifaceted understanding of the valuation dynamics of Birkin bags. These combined analyses reveal the Birkin bag's remarkable resilience and outstanding return potential, firmly positioning it as a formidable challenger to traditional investment paradigms.

The nuanced exploration across Tables 11, 12, and 13, coupled with the strategic insights from the Hermès Bag Index, highlights not just the complexities of luxury market valuation influenced by size, temporal factors, and color variations, but also the profound investment potential of Birkin bags. Empirical data underscore that Birkin investments have outperformed conventional benchmarks such as the S&P 500, gold, T-Notes, and the real estate market from 1998 to 2023, showcasing an impressive stability and profitability through diverse market conditions.

However, this journey into the investment landscape of Birkin bags also uncovers the inherent volatility paralleling the risk profiles of high-yield, alternative investments. This observation underlines the essential need for prospective investors to arm themselves with market savvy and strategic diversification approaches. The reliance on comprehensive analyses, such as hedonic regression models and the Hermès Bag Index, becomes crucial in navigating the nuanced and often unpredictable luxury auction market.

In synthesizing these insights, our concluding reflections on the empirical, analytical, and market trend-based investigations illuminate the dual nature of Birkin bags as both luxury fashion symbols and potent alternative investment assets. This dual role challenges traditional investment paradigms, advocating for a more expansive view that includes luxury goods as potential cornerstones in diversified investment portfolios. The findings not only enrich our understanding of the factors influencing luxury goods' market values but also emphasize the evolving narrative of investment strategies in the contemporary financial landscape.

In conclusion, the findings of this chapter validate the notion that Hermès Birkin bags can be considered a valid and potentially profitable alternative investment. However, like any alternative investment, they require careful and informed management. Investors should

consider not only historical performances but also associated risks, the liquidity of the secondary market, and future prospects of the brand and the luxury segment in which Birkin's are positioned. With these considerations, investments in luxury bags, especially Birkin's, emerge as a dynamic asset class that can enrich a diversified portfolio, reflecting the nuances and complexities of the contemporary financial market.

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