



A Concise Financial History of Europe

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Learning from the innovations of the early bankers, traders and fund managers by taking a historical journey through Europe's main financial centers.

Jan Sytze Mosselaar



AMSTERDAM 10 11 12 13 21 23

BRUGGE 7

LONDON 14

DUTCH REPUBLIC 19

ANTWERP 8

PARIS 17

VENICE 9

FLORENCE 3

ROME 4

PISA 1

GENOA 2

SIENA 6

5

22

24

20

18

16

15

14



25 DEFINING MOMENTS IN EUROPEAN FINANCIAL HISTORY

	Year		City	Chapter
1	1202	Publication of Liber Abaci	Pisa	1
2	1214	Issuance of first transferable government debt	Genoa	1
3	1340	The "Great Crash of 1340"	Florence	2
4	1397	Foundation of the Medici Bank	Florence	2
5	1408	Opening of Banco di San Giorgio	Genoa	1
6	1472	Foundation of the Monte di Paschi di Siena	Siena	1
7	1495	First mention of 'de Beurs' in Brugge	Brugge	3
8	1531	New Exchange opens in Antwerp	Antwerp	3
9	1587	Foundation of Banco di Rialto	Venice	1
10	1602	First stock market IPO	Amsterdam	5
11	1609	First short squeeze and stock market regulation	Amsterdam	5
12	1609	Foundation of Bank of Amsterdam	Amsterdam	4
13	1688	First book on stock markets published	Amsterdam	5
14	1688	Glorious & Financial Revolution	London	6
15	1694	Foundation of Bank of England	London	6
16	1696	London's IPO bubble bursts	London	6
17	1720	Mississippi Bubble	Paris	7
18	1720	South Sea Bubble	London	7
19	1720	Dutch IPO Bubble	Dutch Republic	7
20	1751	Standardized British government bonds ('Consols')	London	6
21	1763	European banking crisis I	Amsterdam	8
22	1772	European banking crisis II	London	8
23	1774	First mutual fund founded	Amsterdam	9
24	1818	First international bond issued by the Rothschilds	London	8
25	1820	First emerging markets crisis	London	8

About the author

Jan Sytze Mosselaar is a Portfolio Manager in the Conservative Equities team. He started his career at Robeco in 2004 and holds a Master's degree in Financial Economics from the University of Groningen. Over the years Jan Sytze has developed a passion for financial history and as result he has collected a lot of books and articles on both history and the financial markets.

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Preface

Robeco has a long and rich heritage as an international investment manager. We have been offering reliable and research-based investment funds to our customers, using our cautious pioneering approach, since 1929.

We believe that research enables us to improve the quality of our investment decisions and improve client returns. An evidence-based approach is a powerful means of testing which factors generate superior risk-adjusted returns over the full business cycle. We also like to use long-term data, sometimes going back as far as the 18th century. Besides our passion for data, we also want to understand why certain factors work. In many cases human behavior is the major force driving asset prices. Something that, interestingly, has been pretty constant through time.

History can therefore be a great guide here. It helps us to better understand investment behavior. Some say history repeats itself, while others say it rhymes. I believe that we can make an active choice to learn from history. Jan Sytze and I both share a passion for financial history. Driven by curiosity I studied history in addition to mastering financial econometric skills.

Over the past couple of years, Jan Sytze has often shared interesting historical facts and fascinating anecdotes with the team. For example, he made us aware of a true financial innovator, Abraham van Ketwich, who invented the world's first mutual fund in 1774. Also, after reading several 'ancient' investment prospectuses, he could confirm to us that they all aim for stable returns, high income and low turnover, virtues that benefit the long-term prudent investor. Elements that are surprisingly fully in line with our Conservative Equity strategies.

At Robeco we like to share our knowledge with our clients. We do this in various forms – videos, articles, seminars, partnerships and books. Honoring this Robeco tradition, Jan Sytze has decided to share all his knowledge with clients in the form of a book. Writing a book is not an easy task. It starts with inspiration but requires a lot of perspiration. Over the last year, Jan Sytze has spent most of his daily commute between Amsterdam and Rotterdam on this project. He also took several days off – not to go on holiday, but to write. His favorite spot was a traditional coffee bar on the Herengracht, near the old canal house of our 'investor hero' Van Ketwich.

All this hard work has resulted in an easy-to-read and concise financial history of Europe, divided into different chapters, which can be all read separately. The book describes the motives, ambitions, successes and failures of the first bankers, traders and mutual fund managers. It is an entertaining read, but also contains lots of historical facts that are still relevant today.

As Kierkegaard stated: "life can only be understood backwards, but it must be lived forwards". A very relevant statement for investors in the 21st century. Enjoy the read and hopefully you will certainly learn something new about some remarkable periods in financial history.

Pim van Vliet

Portfolio Manager Conservative Equities

Introduction

History, and especially financial history, has fascinated me for years. My daily train commute between the Wall Street of the 17th century, Amsterdam, and Little London, as Rotterdam was nicknamed in the 18th century, gave me the time and focus to study and write about the origins of our modern financial markets.

This has resulted in this brief financial history of Europe, the cradle of modern finance. Nine chapters, which can be read separately, take you through some of the defining periods that have formed today's financial markets.

This book describes several defining moments that have shaped today's financial markets, such as:

- Fibonacci's important contribution to modern finance from 1202
- The 14th century Florentine multinational merchant banks
- How the mighty 15th century Medici bankers financed the Renaissance
- The rise of stock, bond and derivative markets
- The surprising origins of the word 'Beurs' (Bourse, Borsa)
- How the Bank of Amsterdam became the world's 17th century safe haven
- Two remarkable and colorful investment books from 1688 and 1720
- The parallels between the stock market bubbles of the 1690s and 1990s
- The Lehman-like crisis of 1763
- The birth of the mutual fund in 1774
- The first emerging markets crisis in the 1820s
- How the Rothschild bankers created the first international bonds in 1818.

Before that, the opening chapter outlines the development of the modern investment fund industry in the 20th century.

It is often said that innovation in financial markets is increasing at an ever-faster pace. I disagree. The real innovators were the merchant bankers in Florence, the statesmen of Genoa, the regulators in Antwerp, the first shareholders and mutual fund managers in Amsterdam, the stockbrokers and investors in London. They revolutionized financial markets; most innovations that have appeared in the 20th and 21st century have just been variations of earlier versions. Even the asset-backed security, which took center stage in the 2007-2008 financial crisis, already existed in the late 18th century.

Three areas play a central role in this story: Northern Italy, the Low Countries and Great Britain. There, in the cities of Genoa, Venice, Florence, Bruges, Antwerp, Amsterdam and London, the first modern banks and multinationals conducted their business, the first stocks, bonds and derivatives were traded, and the first mutual funds were founded. All seven cities played their own important role in shaping today's financial markets; but all did so in a different way.

Northern Italy

Our journey starts in the 13th century in Northern Italy, in the cities of Genoa, Florence and Venice. Together, these cities are the birthplace of modern finance, and their financial innovations influenced other, better-known financial centers like Amsterdam and London in the centuries thereafter. In Northern Italy the first bonds were traded, the first private and public banks were set up and the predecessors of the modern company were established. The oldest surviving bank in the world, Monte dei Paschi di Siena which dates from 1472, emerged during this era.

The Low Countries

From Italy, we travel to the Low Countries, to Bruges, Antwerp and Amsterdam. These three cities, in chronological order, became the financial centers of Northern Europe, as the balance of power shifted gradually from Italy to Northwestern Europe. Bruges and Antwerp were, however, largely influenced and controlled by the Italian and German merchant bankers, while Amsterdam became a financial center on its own, driven by local bankers and financiers. Moreover, Amsterdam became the cradle of breakthrough financial innovations such as the stock market and the mutual fund.

United Kingdom

From the Low Countries, financial power gradually shifted to London, although Amsterdam and London co-existed as two main financial centers for the entire 18th century. At the end of the 17th century, London experienced a financial revolution, which started after the so-called Glorious Revolution of 1688. Throughout the 18th century, the bankers and brokers in London established an active stock and bond market that led to the rise of London as the center of global finance, a position it would firmly hold until the World War I, when New York took over, as the US emerged as the economic superpower we know today.

The old European financial centers of Genoa, Venice, Florence, Bruges, Antwerp, Amsterdam and London experienced many of the same cycles. Innovation and euphoria often resulted in overconfidence, bubbles and fraud, acting as valuable lessons for today's investors.

As Robeco Conservative fund managers, we hope to learn from centuries of financial history. By applying our Conservative Equities strategy in a long-term rules-based

way, we aim to avoid many of the behavioral pitfalls that have been so visible in centuries of financial history, such as overconfidence, short-termism and herd behavior. Humbleness and patience seem to be virtues that are in short supply, especially in today's fast-moving financial markets.

But before we start our historical tour through Europe's main financial centers, let's have a look at the modern investment industry we are working in today. Where are we now? And how did this once-tiny industry grow in just 50 years into the multi-trillion business it is today?

I wish you a lot of reading pleasure!

Jan Sytze Mosselaar

Portfolio Manager Conservative Equities

Where
we are
today

The success story of the mutual fund (1924-today)

To understand the mutual fund industry we operate in today, we have to travel back in time.* How did the mutual fund concept grow into this multi-trillion-dollar business? And what were the investment objectives of the first funds and trusts? The story of the mutual fund in the 20th century is a remarkable one. A story of booms and busts, of fortunes gained and lost, but above all a success story. The idea of offering diversified portfolios to individual investors turned out to be one of the most successful financial innovations of the 20th century, with phenomenal growth rates especially in the last few decades. Today, the investment fund industry is an enormous business: worldwide there are more than 100,000 funds with around 40 trillion US dollars' worth of assets under management.¹ The first modern mutual funds started in the United States in the 1920s, with Boston-based funds such as the Massachusetts Investors Trust and Wellington. Europe followed a few years later, with funds such as the Rotterdamsche Beleggings Consortium, better known as Robeco, which was founded in 1929.

As the market for investment funds grew into the vast industry it is today, the nature of the business also changed, especially from the 1960s onward. The rise of benchmarks, performance measurement techniques and the digital revolution, to name a few developments, have had a large impact: investment funds increasingly started focusing on short-term relative returns versus an index, as fund managers' careers became more and more dependent on the short-term performance they delivered. Relative risk replaced absolute risk as the main yardstick and fund turnover increased dramatically. The first modern open-end funds had different investment objectives than most funds today. As is described later in this chapter, Van Ketwich in 1774, F&C in 1868 and the first 20th century fund managers were looking for stable returns, high income and long-term investments, they didn't have to beat the MSCI World Index as it simply didn't exist yet.**

** The terms 'mutual fund', 'investment fund' and 'fund' are used interchangeably in this chapter, although there are hardly any funds left that are truly mutual, as most funds are part of a publicly listed company.*

*** The first American mutual funds were occasionally compared to the Dow Jones Indices though, which started in the 1880s.*

We advocate a return to these original mutual fund values, basically travelling back to the time when the investment industry was still in its infancy and relatively small. But before open-end mutual funds experienced their exponential growth, closed-end investment trusts first dominated the investment market, until the 1929 crash exposed their poor management and often fraudulent practices.

Investment trusts: from good idea to disastrous results

Investment trusts, also known as closed-end funds, had been around in England and Scotland since the mid-19th century. It was only in the 1920s equity bull market that the trusts became serious business in the US, as American newspapers, writing about the popularity of investment trusts in the UK, sparked the interest of US investors and banks by saying that the US was falling behind in financial innovation.² In 1927 the number of trusts nearly doubled from around 160 to 300, in 1928 another estimated 186 trusts followed and in 1929 a record 265 new trusts were launched.³

As the investment trust industry grew, so did the number of excesses. Manipulation, insider trading, and worst of all leverage turned the sound concept of a diversified investment trust into a speculative vehicle, as leveraged investment trusts started investing in each other, creating a dangerous leverage-on-leverage effect. Furthermore, issuers of trusts artificially pumped up their value to attract new uninformed investors, after having given insiders the chance to buy into the trust at a lower price.

Some of the best-known trusts were introduced by Goldman Sachs. The investment bank was relatively late in jumping on the bandwagon, and sponsored, among other ones, a trust called Goldman Sachs Trading Corporation on 4 December 1928, issued at a price of 100 US dollars per share. Although the trust rose over 100% in the first three months, it plummeted to a miniscule 1¼ in 1932, decimated by the Wall Street Crash.⁴ Most of the investment trusts simply ceased to exist after incurring heavy losses, as the effects of the leverage were felt with a vengeance during the 1929-1933 crash. In the post-depression era, the time had come for unleveraged, transparent and open-end mutual funds.

Boston, the cradle of the modern mutual fund

The first modern, open-end investment fund was founded in 1924 in Boston, the city that became the center of the nascent mutual fund industry, rivalling New York, the center of closed-end investment trusts at the time. On March 21, 1924, the Massachusetts Investors Trust (MIT), which still exists today and forms part of MFS Investment Management, started to offer a low-cost, diversified fund to small investors, similar to Van Ketwich's original idea in 1774, which is described in Chapter 9. The driving force behind the MIT was equity salesman Edward G. Leffler, who introduced the open-end character of the fund.⁷ Unlike Van Ketwich's fund, which had a fixed amount of shares, the MIT Fund issued and redeemed shares depending on investor demand, removing the premium/discount that closed-end funds usually have.

Four months later, a second fund was launched in Boston: Paul Cabot and two associates founded State Street Investment Corporation, followed by the Incorporated Investors Fund in November 1925.⁶ These three new Boston-based funds had all the characteristics of the modern mutual fund: unleveraged investing in stocks with the option to issue and redeem fund shares as necessary. Moreover, in late 1928, the first balanced mutual fund saw the light of day, when the Wellington Fund was founded by Walter L. Morgan.

In the decades after the 1929 crash, Boston-based mutual funds clearly won the popularity contest against New York-based investment trusts: In the 1930s, mutual fund assets grew from 140 to 450 million US dollars, while closed-end fund assets decreased from 2.6 billion to 784 million US dollars. By 1944, mutual fund assets exceeded those in closed-end funds for the first time, helped by the Investment Company Act of 1940, that clearly favored the open-end structure.⁷ Still, in the 1940s, the mutual fund market was relatively small. The December 1949 edition of Fortune Magazine stated that “mutual funds may look like pretty small change”, but that they had good prospects. The article also forecasted that the “rapidly expanding and somewhat contentious industry could be of great potential significance to US business”.⁸

Boom times: mutual funds develop into a multi-trillion industry

The words of Fortune Magazine in 1949 turned out to be prophetic. The mutual fund industry started booming in the 1950s and 1960s. After the equity market stalled in the 1970s, a second period of high growth followed in the 1980s and 1990s, supported by the biggest bull market in history. Global mutual fund assets grew from 4 trillion US dollars in 1993 to a staggering 40 trillion US dollars in 2016. The 1960s proved to be a particularly significant period in the history of mutual funds, illustrated by three main developments: (1) the fund manager’s rise to stardom in the ‘Go-Go years’, (2) the advent of quant finance and its related performance measurement techniques and (3) the introduction of the MSCI World Index in 1969.

The 1960s Go-Go years

The period of the 1960s Go-Go years is not a broadly-known era in investment history, but it is nevertheless quite relevant in the history of mutual fund investing. The term, popularized by business author John Brooks in his book *The Go-Go Years*, applies to the new culture of young, fast-talking portfolio managers who rapidly traded in and out of large blocks of technology and conglomerate stocks. The Go-Go years represented a significant cultural change in the mutual fund business: the old, experienced and conservative fund managers who had witnessed the 1930s, were overshadowed by a new breed of fund managers with only one goal: short-term outperformance. In the words of financial writer Justin Fox, the traditional virtues of conservatism, diversification and stewardship were replaced by return chasing, speculation and salesmanship.⁹ Capital preservation went out of fashion, beating the market became the new name of the game, regardless of the risk involved. The century-long investment values of capital protection, long-term investing and diversification seemed to be completely thrown overboard by the new star managers.

The personification of the Go-Go years was portfolio manager Gerald Tsai of the Fidelity Capital Fund, who was reported to have an annual portfolio turnover of more than 100%.¹⁰ He concentrated his client's money in a handful of growth and conglomerate stocks like Xerox, Polaroid and Litton Industries, as buying stocks that represented traditional corporate America was considered not exciting enough. Tsai's initial results, and those of other high performance funds, were impressive. He became a national investment celebrity and attracted huge inflows, as did his peers. High-performance funds rose on average 40% in 1965, outperforming the Dow Jones Average by 25%.¹¹

These highly volatile growth funds kept on delivering high performance, riding on the back of a strong bull market, until sentiment turned decidedly sour in 1969. Markets plummeted, liquidity dried up and many brokerage firms came close to bankruptcy. The decline in the Dow Jones Index was only half the story. As the index was composed of industrial blue chip companies, it fell 35% from peak to trough in the period 1968-1970. For the popular growth stocks, the decline was far more dramatic with losses of more than 80%.¹² High-performance funds turned out to be high-beta funds after all, as scholar Jack Treynor pointed out. A conclusion that, in his own words, did not make him popular at the time.¹³

This interesting episode in investment history teaches us that riding a bubble can be both rewarding and a rational choice for fund managers. By selecting risky growth stocks, they can rise to stardom quickly and the resulting fund inflows directly lead to profits for the asset management firm.¹⁴ The Go-Go years mark the beginning of a change in the investment industry. In the early days of mutual funds, most stocks were held by individual investors, but this changed in the 1960s and 1970s, as mutual funds and other institutional investors like pension funds and insurance companies came to dominate the market. Nowadays, an estimated 60% to 70%, up from less than 10% in 1950, of the US stock market is in hands of professional investors, who are mostly focused and incentivized on the basis of relative performance versus a predefined benchmark.¹⁵ When investing becomes a relative game, the incentives change and those of asset managers and clients may not necessarily be aligned anymore. We see this as a major force behind the low-risk anomaly, as low-risk stocks are less attractive from a relative performance objective.

The birth of quantitative finance

As the Go-Go years progressed, a new academic discipline gradually evolved, starting at the University of Chicago: quantitative finance. In the decades that followed, the capital market theories and performance measurement techniques developed in the windy city have been embraced by professional investors worldwide. The most widely used capital markets model, the Capital Asset Pricing Model (CAPM), builds on Harry Markowitz' work on diversification and his modern portfolio theory which he had already developed in 1952. The CAPM states that the undiversifiable market risk of a stock, the beta, is the single determinant of stock market returns. In other words, higher risk should lead to higher returns, a theory that has been empirically rejected many times ever since.*

** This rejection of the CAPM forms the basis of the low-risk anomaly as documented in various studies, including those by Black, Jensen & Scholes (1972) and Blitz & van Vliet (2007).*

In wake of these new financial market models, performance measurement techniques also made an entrance. Back in 1957, Jack Bogle had already devised the return/volatility ratio to measure risk-adjusted performance and to showcase the low-risk approach of the Wellington Fund.¹⁶ In 1965 Jack Treynor wrote that a fund's return should be divided by its beta, a ratio now known as the Treynor ratio. A year later, fellow CAPM-engineer William Sharpe introduced his reward-to-volatility measure, appropriately called the Sharpe ratio. Furthermore, Michael Jensen formalized Treynor's beta with the introduction of the concept of alpha in 1968, showing the true, beta-adjusted, added value of fund managers. As mentioned earlier, Treynor concluded that many of the high-performance funds of the 1960s derived their excellent investment returns in the bull market in the first half of the decade because of their high-beta exposure.¹⁷ Their abrupt demise showed that high-risk stocks can give investors high returns in bull markets, but that their performance can be equally devastating in bear markets.

The rise of the index

The performance measurement techniques developed by Treynor, Sharpe and Jensen have become important tools for institutional investors to evaluate investment results, especially relative to benchmarks. The use of benchmarks has made the concepts of tracking error and information ratio two of the most widely used performance indicators in the fund management industry. In 1969, Capital International introduced its first global equity index, later known as the MSCI World Index, which today serves as a main benchmark for global institutional investors. The rise of the index has been phenomenal: today 10 trillion US dollars are benchmarked against MSCI indices, 10 trillion US dollars against FTSE/Russell indices and 7.9 trillion US dollars against the S&P 500 Index.¹⁸

The rise of the index also sparked the start of another large recent trend in investing, namely passive investing. In the 1970s, institutional investors became interested in just buying 'the market' at low costs. At the forefront of this development was the pension fund of American luggage manufacturer Samsonite, as it asked Wells Fargo in July 1971 to build an equally weighted, passively managed portfolio of 1500 stocks listed on the New York Stock Exchange. They soon realized that the periodic rebalancing back to equal weights was an operational nightmare and incurred high transaction costs.¹⁹ They wisely switched to a market-cap weighted portfolio, which has been the standard way of passive investing ever since.

Later on, John Bogle made passive investing accessible to the individual investor as well, with the foundation of Vanguard, which now has grown into the second-largest asset manager worldwide. Initially, Bogle advocated active investing, as he showed that the first Boston-based mutual funds had achieved good returns against lower risk.* Experienced portfolio managers, he argued, could be able to offer good risk-adjusted returns for their clients, through a conservative and long-term investment policy. But after the excesses in the 1960s Go-Go years, he became the embodiment of passive investing and founded Vanguard in 1975 as a spin-off of investment manager Wellington.

** Armstrong (1960). Bogle used a pseudonym as he didn't want his employer Wellington to get into trouble for improper advertising, according to Fox (2009).*

Vanguard's main fund, initially referred to as 'Bogle's Folly', exceeded the USD 100 billion mark in 1999 and has around USD 300 billion in assets, as of the end of 2017. Although it was considered 'un-American' to settle for the market average, many institutional investors started to adopt passive investing in the 1990s. In the last ten years, retail investors have also started to invest passively. The growth of passive investing was further spurred by the invention of the Exchange Traded Fund, better known as the ETF. The total ETF market surpassed the USD 4 trillion mark in 2017 and continues to grow, also outside the US.

The rise of the quants: Factor investing

Next to active and passive investing, a third way way of investing has emerged in the last few decades, namely factor investing. Factor investing is based on academic evidence, as much as passive investing is justified by the academic insight that capital markets are efficient. However, from the early 1980s, studies started to shoot holes in the theoretical concept of market efficiency, showing the superior performance of different factors such as size and value. This academic shift in consensus was marked by the seminal 1992 Fama & French study, in which they show a flat relationship between risk and return. They go on to show that beta is not related to return, but size and value are. A year later, a paper by Jegadeesh and Titman in 1993 added momentum to the list of factors. Quantitative funds have several things in common. They are based on academic evidence, implemented in a systematic, rules-based way and target a limited set of proven factors. The most common factors are value, momentum, low-volatility, quality and size. They are offered both in an exchange-traded structure and as active mutual funds. Nowadays most of the largest institutional investors have included factor-based quantitative funds in their equity portfolios.

Factor investing has become more powerful through the use of technology, as many strategies and ideas can be tested easily nowadays. Moreover, the Digital Revolution has had a massive impact on financial markets: on the way capital markets operate, on how banks do business and on how fund managers construct and monitor their investment portfolios.

Another revolution took place around a 1000 years ago, which, like the Digital Revolution, had a large impact on society and the way the economy functioned. This revolution is called the Commercial Revolution, which was the period between roughly 1000 and 1300, and can be considered as the first period in the long history of modern financial markets. Chapter 1 shows how Northern Italy was the center of this Commercial Revolution, and how the region became the cradle of the earliest versions of multinationals, financial instruments, bond markets and banks.

THE RELEVANCE OF CENTURIES-OLD INVESTMENT VIRTUES

As a result of the explosive growth in professionally managed assets, accompanied by the increased use of benchmarks and performance measurement techniques, mutual fund investment objectives changed as well: relative yardsticks like annual (or even quarterly) outperformance and tracking error, all evaluated over a short-term horizon, replaced measures like downside risk and absolute return. Moreover, most investment processes nowadays mostly revolve around overweights and underweights against some benchmark weight, and trading behavior is often influenced by short-term earnings figures. Stock market turnover has increased massively, helped by ever-declining trading costs.

This clearly contrasts with the long-term objectives of the early mutual fund managers, who cared about capital protection, income and the longer term, as their prospectuses clearly showed:

- **Van Ketwich's** funds in the period 1774-1776 as described in Chapter 9, focused on diversification, high income, while maintaining a buy-and-hold character. Through diversification, Van Ketwich and his co-founders stated, the funds offered capital protection to small investors.²⁰
- The **F&C Investment Trust** of 1868 had similar objectives: through investing in emerging debt securities, the trust offered investors a high income, and by holding most of the carefully selected bonds to maturity, turnover was as low as 2%.²¹
- In its 1924 offering circular, the **Massachusetts Investors Trust** pointed out that the fund was “suitable for every class of investor who demands above all other considerations Safety of Principal and Income”. The circular also stated that the fund’s dividend yield was likely to be above 6%.²²
- Balanced investment manager **Wellington** stated that the fund’s goal was to “to pay reasonable dividends, to secure profits without undue speculation, and to conserve principal”.²³
- **Robeco**, founded in 1929, had its first investment objectives drafted in 1931. The fund would, after careful research, invest in high yield bonds and high quality stocks. Moreover, the objectives stated that active management was applied to avoid investment losses, and stocks and bonds were bought for the long-term, not for speculative reasons.²⁴
- Robeco’s prospectus at the time of the fund’s stock market listing in 1938 restated these investment objectives, although using slightly different wording. The fund managers were to avoid losses through a conservative investment policy, while diversification was safeguarded by investing in a large number of securities. Moreover, the long-term character of the fund was reiterated once more.²⁵

The Prudent Man Rule of 1830

These ‘old-fashioned’ investment values resemble the Prudent Man Rule of 1830. This rule was drawn up after the Massachusetts court ruling that followed a Harvard College lawsuit against its former trustee Francis Armory, who had lost some of the trust’s money by investing in stocks. The judge decided, however, that Armory was not to blame, as he had invested in a conservative and diversified manner.

The court stated that: “All that can be required of a trustee is that he shall conduct himself faithfully and exercise a sound discretion. He is to observe how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income as well as the probable safety of the capital to be invested...”²⁶

Going back to basics with Robeco Conservative Equities

In an industry that is focused on short-term relative performance and that exhibits high turnover, we cherish this Prudent Man Rule of 1830. The three values mentioned in the original Prudent Man Rule of 1830 serve us as a useful benchmark in the Robeco Conservative Equity strategies:

1. **“Considering the probable safety of capital”**: Capital preservation is the cornerstone of Robeco Conservative Equities. We aim to avoid downside risk and provide capital protection. Evidence-based historical insights helped us draw up heuristic long-term prudent investment rules.
2. **“Considering the probable income”**: Stable income is a timeless client benefit, which is currently popular and will still be in demand for the next 200 years. However, we are aware that this is not always the case, for example, not in the exuberant 1920s, the performance culture of the 1960s or the bubble in the late 1990s, when dividend was subordinate to capital appreciation.
3. **“Not in regard to speculation”**: The main focus of Conservative Equities is to reduce downside risk and focus on the long-term rather than the short-term. The strategy is designed to benefit from investment behavior, aiming at high risk-adjusted returns. We want to keep things as simple as possible and as complex as necessary and trade as little as possible and as much as needed.

A Concise Financial History of Europe



NORTHERN ITALY, THE CRADLE OF MODERN FINANCE

Our journey through European financial history starts in Northern Italy, the undisputed cradle of modern finance. Italian merchants and bankers revolutionized the use of financial techniques in the period between 1200 and 1500. These include business partnerships, the holding company, double-entry bookkeeping, international giro payments and the bill of exchange.

However, the continent of Europe had a lot of catching up to do before it developed into the advanced society we live in today. In the Middle Ages, Europe was a backwater compared to the flourishing regions of the Middle East and China.

Venice in 1338. An illustration from *A Short History of the English People*, by J R Green, illustrated edition, Volume I, Macmillan and Co, London, New York, 1892.

The Commercial Revolution: Europe's escape from the Middle Ages

This started to change around the year 1000, when a period started which historians refer to as the Commercial Revolution.²⁷ Cities started to emerge, the European population started to grow, agricultural techniques advanced, and Europe's first university was founded in Bologna, in 1088. The first university being founded in Italy was no coincidence. Northern Italy was the most advanced region in Europe at that time, supported by trade with the more prosperous Middle East. Venice, due to its location, profited most from this trade, and became the most important commercial center in the region in the late Middle Ages.

As economic activity started to grow in Europe, Italian merchants did business all over the continent, although they primarily traded with their counterparts from the Low Countries at medieval trade fairs held annually in the Champagne region near Paris. Later on, trade concentrated in their local cities, especially in the region of Tuscany, which became a center of clothing and silk production. During this period, some merchants slowly evolved into merchant bankers, as their trade activities brought them wealth, which they used to offer financial services to other merchants. Today we still use the term merchant banking to describe the financial services that banks provide to companies.

Fibonacci's revolutionary Liber Abaci

The early Italian merchant bankers developed a competitive advantage thanks to several innovations and techniques, such as the bill of exchange (the predecessor of the modern check), the invention of double-entry bookkeeping and the use of sophisticated calculation techniques. These calculation methods were introduced in the *Liber Abaci*, the Book of Calculations, which was published in 1202 by Leonardo of Pisa, better known as Fibonacci. Although Fibonacci nowadays is known primarily for his Fibonacci Sequence, where the next number in the sequence is the sum of the two previous numbers (1,1,2,3,5,8,13,21,34) and which describes the growth path of many living organisms such as rabbit populations, he also made significant contributions in the field of economics and mathematics. In his work, he provided techniques for present value calculations, profit sharing plans, interest rate calculations and fractions.²⁸ But the *Liber Abaci* was primarily ground-breaking because of Fibonacci's introduction of the Hindu-Arabic numerical system of 0-9 instead of the Roman numerals which were still in use at the time. The Roman numerals made it virtually impossible to make quick calculations, and necessitated the use of an abacus, while Fibonacci showed how easy commercial calculations became with the Hindu-Arabic numerals.

In his work, Fibonacci was largely influenced by the Persian mathematician Muhammad Ibn Musa Al-Khwarizmi, who lived around 780 to 850 in Baghdad. Through him, we still use the words 'algorithm', which comes from the Latin translation of his name, and 'algebra', which is part of the title of his most important book. Fibonacci made several references to Al-Khwarizmi as his role model, which is further proof of the sophistication of the Middle East compared to Western Europe at the time. Even though Hindu-Arabic numerals made calculations much easier, it took a long time before the system was generally accepted. Even almost a century

Page 27: *Liber Abaci*, 1202, a historic book on arithmetic by Leonardo of Pisa, known later by his nickname Fibonacci. *Liber Abaci* was among the first Western books to describe Hindu-Arabic numbers traditionally described as "Arabic Numerals". By addressing the applications of both commercial tradesmen and mathematicians, it contributed to convincing the public of the superiority of the Hindu-Arabic numeral system.

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 ii.	 xii.
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 iiii.	 xiiii.
 v.	 i.
 vi.	 ix.
 vii.	 lxx.
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 ix.	 xc.



Money changer, detail from the predella of an altarpiece, 1410, by Pietro di Miniato (1366-ca 1450), commissioned by the merchant Francesco Datini (1335-1410). Italy, 15th century.

later, in 1299, the Florentine guild of moneychangers still forbade the use of it, and the famous Medici Bank in Florence did not fully adopt the numerals until 1500.²⁹ Nevertheless, Fibonacci, together with the invention of the bill of exchange and double-entry accounting, gave the Italian merchants a big advantage over merchants from other regions.

Bankers or tablers?

Some of the larger merchants who had become merchant bankers, were mostly involved in exchanging money, making them the predecessors of modern foreign exchange (FX) dealers. For this reason, the guild of bankers in Florence was called Arte del Cambio (guild of moneychangers).³⁰

The early bankers in Tuscany sat on their benches (*bancu* in Latin, *banca* in Italian, hence the word bank) at their tables, serving merchants who had to deal with coins from many different cities and regions, as every city had its own currency. Interestingly, the medieval financial institutions Gran Tavola in Siena and the Taula di Canvi in Barcelona were named after the ‘table’ instead of the ‘bank’.

The huge archive of one of these early bankers, Francesco Datini, has survived until today. Datini was a merchant in Florence who lived from 1335 to 1410, and he left us some 150,000 letters, 500 account books and 300 notary letters.³¹ His documents give an excellent insight into the early days of modern finance and especially on the use of bills of exchange, the medieval variant of FX contracts. Through the bill of exchange, merchants settled payments with each other in different cities without exchanging and transporting real coins.

Due to its structure, the bill was also the ideal instrument to circumvent the Church’s prohibition on charging interest rates when lending money. Interest rate charges were simply included in the different FX rates of the bill. As FX rates could fluctuate, the bill was not considered a loan and therefore not regarded as usury by the Church.³² Merchant banks used bills of exchange in large quantities, reaping profit not only from lending money, but also by speculating on the course of FX rates. It was estimated, for example, that the Milanese merchant banker Borromei, who had branches as far away as Bruges and London, earned half of his profits through FX trading.³³

The Lombard bankers

Two groups of financiers openly charged interest for loaning money, and were socially excluded from society for their usurious activities. The first were the Jews, who could charge interest rates to Christians as they were not regarded as their ‘brothers’. The second group were the pawnbrokers, nicknamed the Lombards, as most of them originally came from the Northern Italian region of Lombardy. Financial centers like Antwerp, London and Amsterdam still have a Lombard Street in their historical city centers that commemorate them.

Despite their banking activities, the Lombard bankers and Jewish financiers did not interact with the ‘high finance’ merchant bankers and were mostly restricted to living on the outskirts of the city. In Venice, for example, the Jews were compelled to live in the ‘Ghetto’, which still bears this name today and is where the office of the Banco Rosso, one of the main Jewish pawnbrokers, is still located. These pawnbrokers were banned from several cities from time to time, until it was realized that the population needed the financial services they offered, especially in times of economic hardship. They were then tolerated, but often had to pay fines, in the form of an annual license fee, to be able to conduct their activities.³⁴

From charity to the world’s oldest bank

To overcome the problem of being too dependent on the usurious activities of the Lombard and Jewish pawnbrokers, cities started to found municipal banks that were run as charity institutions, lending money to the poor, sometimes without charging interest. The first such *Monte di Pietà* (Mount of Pity) was founded in Perugia in 1467 and half a century later, Italy had a total of 89 *montes*.³⁵

From Italy, the idea spread to the Low Countries, where these institutions were called *banken van lening*. In Amsterdam, the Stadsbank van Lening was founded in 1614 and nowadays still operates as a pawn bank, lending money in exchange for collateral. Despite the existence of the montes, the Lombards and Jews did not go out of business as they were less bureaucratic and were also prepared to lend out large sums when necessary.

The most famous monte is the world's oldest bank in existence, the Monte di Paschi di Siena, which was founded by the city of Siena as the Monte di Pio in 1472 and was financed by loans from the city and by donations from local charities.³⁶ A few decades later, the monte started banking activities to kickstart the stagnant local economy, helped by a local government guarantee on the back of the proceeds from the city's pasture lands in the Maremma region (the *paschi* which gave the bank its name).³⁷ Despite its recent problems, Monte di Paschi is still an important bank in Italy today, especially in the region of Tuscany.

The Casa di San Giorgio and the first government bonds

As with many early financial innovations, we have to travel to Genoa for the predecessors of modern bonds. The earliest form of public debt in Europe was launched in the city in 1149, just ahead of Venice in 1164.³⁸ The loans were called *comperere*, literally a purchase, and were paid off with specific tax revenues. In Venice and Florence these were called montes, not to be confused with the Monte di Pietà. Already in the early 13th century, in 1214, this public debt in Genoa was divided into shares, known in Latin as *luoghi* or *loca*, of 100 lire.³⁹ These *luoghi* were standardized and transferable, making them the predecessors of the modern government bond.

Two centuries later in 1407, Genoa took a revolutionary step with the creation of the Casa di San Giorgio, set up to consolidate the city's debt, as Genoa's debt burden spiraled out of control due to its wars with Venice.⁴⁰ All existing *comperes* were consolidated into San Giorgio bonds, yielding 7%.⁴¹ These bonds were transferable and were held by people from all levels of society. The consolidation of government debt into a share-issuing institution was imitated by the Bank of England in 1694, as described in Chapter 6.

The predecessors of the modern central bank

In 1408, a year after the foundation of the Casa, the Banco of San Giorgio was set up as a banking unit of the Casa and is considered by some historians as the world's first public bank.⁴² The bank accepted deposits, made money transfers between accounts and could lend money to its account holders. The Banco di San Giorgio served as an example for the Venetian public Banco di Rialto that was founded in 1587, which in turn was the main example for the highly successful Bank of Amsterdam from 1609, which is the topic of Chapter 4. The Venetian Banco di Rialto was founded because Venice had an extremely unstable banking system, as was the case in many cities. It did not have large internationally operating merchant banks like Florence, but many small locally operating deposit banks. The Banco di Rialto turned out to be a successful solution for this unstable system. It only facilitated payments and did not lend money to anyone, making it an extremely stable bank with a 100% reserve ratio, enhanced by a state guarantee.



The bank took coins on deposit from merchants, who opened and carried out transactions via their accounts, which also solved the problem of the shortage of coins.⁴³

[View of Genoa and its harbor, painting by Cristoforo Grassi \(1565-1598\). Italy, 15th-16th century. Genoa Pegli, Civico Museo Navale \(Boat Museum\)](#)

Deposit banks were notoriously unstable because of wars, rogue bankers, seasonal patterns, the shortage of liquid investment alternatives, and their small scale. As a result, banks were regulated by the local governments, and penalties for fraudulent and insolvent bankers were high. A banker in Barcelona, Francesch Castello, was actually executed in front of his own bank in 1360 after going bankrupt!⁴⁴ Bankers who lied about their books could also be given the death penalty. Somewhat different to the treatment given to the CEOs of the investment banks that went bust in 2008. Florence never had a public bank, as the city had a strong private banking sector. The city boasted the first multinational banks in Europe, which belonged to the Bardi and Peruzzi families, known as the medieval super-companies, as well as the famous Medici family, the main financiers of the Renaissance. These Florentine merchant banks are the focus of the next chapter.



THE SUPER-COMPANIES OF FLORENCE

This second chapter describes the predecessors of modern multinationals and financial conglomerates: merchant and banking families from Florence that operated as multinationals with several offices all around Europe. The Peruzzi, Bardi, Acciaiuoli and Medici bankers made payments over large distances, traded in commodities, lent large sums to kingdoms, oversaw the pope's finances and arbitrated between currencies. Of these four multinationals, most is known about the Peruzzi and Medici empires, which is why these two companies are this chapter's central topic.

Detail of The Procession of the Magi by Benozzo Gozzoli
Lorenzo de' Medici, 'the Magnificent' (1449-92), as one of the Three Kings, Palazzo Medici-Riccardi, Florence, Italy.

The heyday of the Peruzzi, Bardi and Acciaiuoli merchant bankers was from 1300 to 1340, for the Medici this was the 15th century. These Florentine families became the main financiers of Europe, and their florin, first coined in 1252, became Europe's main currency and left its marks. For example, until the introduction of the euro, the Dutch guilder was nicknamed *florijn*, after the florin, hence the use of *fl* in front of every guilder amount. The Florentine domination lasted until the end of the 15th century, when the Medici Bank collapsed.⁴⁵

The medieval super-companies

The Peruzzi, Bardi and Acciaiuoli companies are dubbed as 'medieval super-companies' by historian Edwin Hunt, who closely studied the surviving accounts of the Peruzzi Company. His book, 'The Medieval Super-Companies', is the primary source for the first part of this chapter. Only these three companies are classified by Hunt as super-companies as they alone were capable of operating large scale commodity trading (primarily from Florence to Naples), handling international financial transactions, and operating via multiple international branches. Their activities were supported by huge flows of capital and large workforces. Big was beautiful, and above all necessary in order to be able to move massive quantities of bulk commodities such as grain. Later, the companies were also involved in importing English wool, primarily for the Flemish clothing industry.

The merchants operating these companies had to be extremely talented, as they had numerous international branches and product lines. Communication between the branches was slow, the operations required vast amounts of cash for long periods, and there were no international laws to protect the companies' rights. Above all, employees had to be experts not only in trading, banking, exchanging currencies, accounting and legal systems, but also in judging the quality of grain, wine, spices, wool and materials – and all in a multi-lingual environment.

Cash is king, but the king needs cash

Perhaps the biggest challenge for these super-companies was cash management. In every transaction, capital was tied up for a long time. Based on archival material, Hunt cites a good example of the complexity of moving wool from England to Florence:

- In London, customs and export taxes had to be paid, as well as tips to officials, wine for the clerks, fees to the customs weighers and brokers.
- From England, the wool was shipped to Libourne, near Bordeaux, where the innkeepers had to be paid for temporarily storing it.
- The wool was carried overland to Montpellier and then shipped to Pisa.
- In Pisa, payments were made for portage warehousing, carriage and notary services.
- On the route to Florence, tolls were paid at three locations.
- In Florence, custom fees were paid.

A smooth journey took several months, and required scale and capital, something only the super-companies had. In order to have cash available, the Peruzzi company kept their fixed investments to a minimum, for example by renting any ships or warehouses when needed,

instead of owning them. However, in order to conduct the grain and wool trade, and maintain their monopolies in both England and Naples, the companies had to lend money to the cash-strapped kingdoms of those regions, which made cash management even more of a challenge. Good relationships with these kingdoms were an absolute necessity, and only the super-companies had the means and power to establish these. A monopoly on trade was given in exchange for large loans, which the kings used to finance wars and their extravagant lifestyles.

Taking a closer look: the rise of the Peruzzi Company

Hunt primarily focuses on the Peruzzi family, as their accounting books from the period 1335-1343 have survived. Furthermore, one of the partners of the company, Giovanni Villani, was not only a merchant banker in the Peruzzi empire but also the chronicler of Florence. The term super-companies has to be put in perspective in light of modern corporations. The Peruzzi company had some 100 employees in 15 different branches in cities like Florence, Antwerp, London, Bruges, Paris, Palermo, Majorca, Tunis, Rhodes, Sardinia, and Cyprus. Still, in an era without real companies, their size was unparalleled. Hunt further estimates that the Bardi company was actually one and half times bigger than the Peruzzi empire.

The Peruzzi already traded commodities and luxury goods in the 1280s, but the year 1300 marked the start of their multinational empire. In that year, the First Company was launched, with 44% of its capital coming from outside the family, brought together by ten non-family members. The organizational structure was set up in 1300 and was maintained until the company's bankruptcy in 1343. The company was divided into a merchant business and a banking business, called the *tavola*, as opposed to the more commonly used *banca*. Different subsequent companies, such as the Second Company, were later established, mainly to unwind the capital structure and to start with a new list of shareholders. The different companies lasted anywhere from two to twelve years. Meanwhile, the company conducted its operations uninterrupted. To emphasize the permanent character of the business, both the Peruzzi and the Bardi company had company logos, such as the Peruzzi's golden pears on a blue background, and the Bardi's diamond-shaped heraldic design.

No grain, no gain

The companies' success was mainly down to the grain trade. In the 14th century, Florence needed grain from Southern Italy to feed its rapidly growing population. Hunt illustrates the importance of the grain fields of Naples and Sicily to Florence nicely by comparing them with the importance of Middle-Eastern oil fields to the modern Western world today. The super-companies had to work together to satisfy the needs of the Kingdom of Naples to establish a monopoly on this grain trade.⁴⁶ In 1316, for example, the Peruzzi, Acciaiuoli and Bardi companies formed a syndicate that collected taxes in the region, paid salaries to government personnel and managed the grain and wine trade. The Florentines were closely involved with Naples, as many Florentine nobles became government officials, and Robert, the king of Naples, resided at one of the Peruzzi palaces when he visited Florence. This was clearly a win-win situation: Florence got its grain, Naples got its cloth, and the super-companies made large profits on both sides.

Two other lines of business were important for the Peruzzi: the financial dealings with the papacy, for which they organized international financial transactions, and the English wool trade. Nevertheless, the grain trade always remained their most important and profitable activity. Like modern companies, the Peruzzi Company dealt with outright corruption from time to time. For example, in 1330, the company accused Silimanno Bottieri, who had been employed by the family for 16 years in its Bruges and London offices, of stealing 5,000 of the 50,000 florins he managed. Moreover, in 1336, Iacopo di Tuccio Ferrucci was locked up in a Florentine prison for having, according to the company records, 'made much damage to us while staying in Naples and Avignon'.

But in general, the Peruzzi company had strong leaders. Filippo de' Peruzzi headed the company between 1292 and 1303 and during this period he set up the First Company in 1300. Afterwards, Tomasso de' Peruzzi managed the company for almost 30 years, between 1303 and 1331. The Peruzzi Company experienced its most prosperous years between 1312 and 1324, when the Third Company was active. It had a large capital base with three main sources of income: an immensely profitable grain trade, the Pope's finances which gave the company much allure, and the English wool trade, which developed nicely after 1320.

A not so super-company: the decline of the Peruzzi Company

But the company's fortunes started to change in the 1330s, with Tommaso's death in 1331 coming at a very unfortunate moment. The company was experiencing several headwinds, such as the large flood that hit Florence in 1333, heavily damaging warehouses, buildings and merchandise and burdening the company with heavy costs. Furthermore, the Florentine economy was clearly weakening, partly as a result of the many wars with neighboring city states such as Siena, Pisa and Lucca. But the biggest problem seemed to be the lack of leadership. As is still the case today, bad leadership can destroy an otherwise solid company. Around 1335, the Peruzzi Company could still have been salvaged with good leadership and a positive economic environment. Unfortunately, neither happened.

In order to make the company great again, the Peruzzi had extended their business in England to compensate for the troubles in Italy, where they had even lost their business with the papacy in 1342 to competitors from nearby Siena. Hunt characterizes this loss of papal business as the medieval version of getting downgraded by S&P and/or Moody's. Above all, it was a sign that, for the time being, the good times for Florence were over. The number of employees clearly shows how the company was slowly shrinking: in 1335 the Peruzzi employed an estimated 96 employees, in 1340 the headcount had shrunk to 70, and finally in 1343 to only 47.

The chairman of the company at the time, Bonifazio, even moved to England, which shows how important the English wool trade had become for the Peruzzi. Exporting more wool from England, however, also meant more lending to the English kings. It is unclear how much they lent in total, as the numbers of the chronicler Villaini seem to be exaggerated, according to Hunt. However, both the Peruzzi and Bardi companies clearly became heavily involved with King

Edward III, who used the money he borrowed to finance expensive wars with France during the Hundred Years War in the early 1340s, and his lavish lifestyle. Three years later, his failure to pay back his debt proved to be fatal for the super-company.

The 'Great Crash of 1340'

On 27 October 1343, the company declared itself bankrupt, after having been in business uninterrupted for 51 years. What caused the company to fail in 1343? Popular opinion is that the large loans to the English crown caused the demise of both the Peruzzi and Bardi empires. However, Hunt is not so sure of this. The companies were already on a downhill path before the English crown defaulted on its debts in 1343, as the Florentine economy had been experiencing an economic depression since 1340, during which high food prices and low wages led to miserable situation until at least 1347.

As a result, the Florentine government also defaulted on their debt in 1342, which decreased the market value of their bonds by around two thirds, leading to serious losses for the company, as they were large holders of government debt. At the same time, the previously excellent relations between Florence and Naples started to deteriorate severely, leading to large withdrawals at the Naples bank branch of the Peruzzi Company in 1342. Edward III's default seems to only have been the final event that tipped the company over the edge a year later in 1343.

Whatever the reason, the heyday of the Florentine super-companies was over. The Bardi eventually defaulted three years later, in 1346, alongside numerous smaller companies and banks in Florence. Depositors only saw an estimated 20% to 50% of their initial investment again. The crisis has been dubbed the 'Great Crash of 1340' and is often referred to as the first European banking crisis. However, the problems were clearly confined to Florentine banks, making the crisis not as widespread as the European banking crisis of 1763, when banks in London, Amsterdam, Hamburg and Stockholm all defaulted on their debts, as described in Chapter 8.

The Medici Bank: From low reputation to high finance

Half a century after the fall of the Peruzzi and Bardi super-companies, another Florentine banking dynasty became the largest financier in Europe: the Medici.⁴⁷ In the words of historian Niall Ferguson, perhaps no other family has left such a large footprint on an era as the Medici did on the Renaissance in 15th century Italy.⁴⁸ Through their wealth, they financed most of the Renaissance works of arts, that can still be admired in today's Florence. The size of their art collection, assembled at the Uffizi Gallery, is simply astonishing.

The Medici paid for all this through the profits they made on their banking activities through the Medici Bank, which was founded in 1397 and existed for almost a century until it was wound up by the French invaders in 1494. The bank was founded by Giovanni de Bicci de' Medici, who wanted to erase the poor reputation the family had developed; in the years before 1397, five family members were hanged for capital crimes.⁴⁹



Madonna of the Magnificat by Sandro Botticelli. The Virgin Mary crowned by two angels, the Child Jesus is holding a pomegranate, symbol of the Resurrection, on the left the portrait of Lorenzo de' Medici as the young man with the ink-pot, flanked by his brother Giuliano de' Medici who is holding a book.

The administration of the bank, called the *Libri Segreti* (the Secret Books) was only discovered in 1950, in a misplaced file in the archives of Florence. The Libri contain the administrative records, profit/loss and capital accounts for all the Medici bank offices over a period of more than 50 years (1397-1451). From 1451 on, only the letters between the partners of the bank have survived, which give a good idea of the policies the Medici used to manage their empire. Historian Raymond de Roover gained access to these archives and turned his research into his book called 'The Rise and Decline of the Medici Bank', published in 1966, which serves as the primary source on the Medici Bank in this chapter.

The history of the bank is important in our understanding of the roots of modern business and banking. The Medici had more of a focus on banking than the super-companies did. They attracted deposits, lent out money, traded in bills of exchange and organized international payments, primarily for the pope in Rome. The Medici's scale and diversity enabled them to lend money at much more attractive rates than the old pawnbrokers. In the words of Ferguson, Giovanni de Bicci de' Medici succeeded in making banking both respectable and more profitable than it had ever been before.

God's bankers

The Medici banking empire started in Italy, with branches in Florence, Venice, Rome and Naples, and later expanded to other centers of commerce like Bruges, Avignon, London and Geneva. The bank was founded in 1397 when Giovanni de Bicci de' Medici, who managed a bank in Rome, moved back to his hometown of Florence to found the Medici Bank. The Rome branch continued to exist, however, and turned out to be a highly profitable part of the Medici empire. Five years later, in 1402, the bank opened an office in Venice, an important trading hub with the Levant. The manager of the branch, Neri Toraquinci, caused the branch to get off to a bad start. He ignored the bank's rules and lent money to German merchants in Venice. Unfortunately for Toraquinci, the Germans defaulted on their loans, and he had to commit fraud to conceal his losses. Toraquinci was fired as soon as the senior management back in Florence found out in 1406.

More branch openings followed in the next few decades. In 1436, the Bruges office was opened, which was an important trading hub in the north of Europe. Ten years later, the bank opened its doors in London. Before that, London was serviced from Bruges, as the Belgian city was much more important than London at the time. In both cities, the bank was already doing business before it opened a local office, by mainly working through agents. At its height, in around 1455, the Medici had branches in Florence, Pisa, Venice, Avignon, Bruges, Geneva, London and Milan, as well as three workshops – two for wool and one for silk. The Rome branch was by far the most profitable: between 1420 and 1435, 60% of the bank's profits came from Rome, while the Florentine headquarters accounted for just over 10%.

Dealing with the pope proved to be very lucrative, and the family were soon known as 'God's bankers'. In their hometown, however, the Medici Bank was anything but a monopolist, as there was fierce competition between banks in Florence. In 1399, no fewer than 71 banks were members of the city's moneychangers guild.

The first modern holding company

Perhaps because of this competition, the Medici bank never reached the size of the Peruzzi and Bardi super-companies, but the bank was still unparalleled in power at the time. At its height, around the year 1455, the Medici bank had about 65 employees. The family had probably learned from the fall of the super-companies, as they set up their banking empire as a holding company, made up of different, relatively independently operating partnerships, under the supervision of the Medici headquarters in Florence. In this way, risk was diversified over different locations and it prevented a bankrupt office, like the Bruges branch in 1478, from bringing down the whole Medici Bank. The Medici took the model of the holding company very seriously with individual branches treating each other like outside customers.

At the head of each branch was a partner or a factor. A partner, or *compagnia*, had more of a stake in the business than a *fattore*, who was considered an external manager. The *fattore* had to obey an extensive set of rules, set out by the Medici partners in Florence. For example, in 1455, the Bruges branch manager Tani, was informed that he was not supposed to hire personnel himself, loan money to local governments, carry out purchases above a certain price, and, perhaps most curiously, he was not allowed to gamble or welcome women to his house. So yes, the bank was decentralized, but it was very clear who were in charge: the *maggiori* of the Medici family in Florence.

Head of the bank, father of the nation

Within 20 years of the death of his father Giovanni de Bicci in 1429, Cosimo de Medici became the undisputed ruler of Florence, the *pater patriae*, the father of the nation. Not bad for a family that a century earlier was nothing more than a group of backstreet moneylenders. Ferguson goes as far as to call the Medici Bank the birth of modern banking, as never before had a bank had so much power and influence. He states that with the Medici, banking stepped out of the obscurity of usurious moneylending and entered the world of high finance.

Cosimo de Medici played a large role in this, under his management the bank experienced its highest growth. He opened branches, and used the bank's profits to finish the construction of the impressive Duomo in 1436, and commissioned other famous Renaissance art works. The vast fortunes of the Medici basically financed the Renaissance through the work of geniuses like Michelangelo, Brunelleschi and Botticelli. The Medici made use of bills of exchange to circumvent the Church's ban on charging interest rates. They simply concealed interest rates payments by using multiple currencies in their transactions. In this way money lending became banking, as the Medici granted credit to whoever needed it through their bills of exchange, without worrying about this being seen as usurious.

From magnificent Medici to mismanagement

Cosimo's grandson, Lorenzo de' Medici, became head of the bank in 1469 and was known as Lorenzo il Magnifico. He was a brilliant politician and supported several Renaissance artists, as he wanted to leave his mark on the city, just as Cosimo had done. Lorenzo was,

however, not a brilliant banker and delegated too much power to bank managers outside the family. For example, he appointed non-family member Francesco Sassetti to the position of general manager, who subsequently failed to carefully monitor the books of the relatively independently operating branches.

This led to problems in the branches in Bruges, London and Lyon, where accounting fraud and overstretched balance sheets weighed heavily on the bank. Sassetti was able to save the Lyon office, but in 1478, the London branch was closed, as it had lent too much to King Edward IV, just as the Peruzzi and Bardi companies had done to his predecessor one century earlier. Like the Peruzzi, the Medici didn't have a choice, as lending to the king was a prerequisite for doing good business in England. The failed London branch's debt of 50,000 florins was taken over by the Bruges branch, which was already in bad shape itself. Manager Tommaso Portinari was an imprudent business man, who had become rather involved with the Burgundian court to elevate his own social status instead of managing the branch properly. In a similar case to that in London, he and the Bruges branch lent too much money to the local court, which led to the branch's collapse in the same year the London branch failed, 1478.

1478 was a tough year for the family anyway, as the overwhelming power of the Medici family led to attacks from other rich Florentine families. This culminated in the so-called Pazzi conspiracy on 26 April 1478, at a time that the bank was already in demise. During Mass on that day, Giuliano de' Medici was stabbed to death by a member of the major rival Pazzi family, while Lorenzo de' Medici was able to escape. However, the Florentine population continued to support the Medici family as they had brought prosperity and low tax rates to the city. Several Pazzi's were prosecuted for their deeds, and hanged on the facade of the Palazzo Vecchio.*

The Medici bankruptcy

After the death of Lorenzo il Magnifico in 1492, the Medici bank quickly weakened further, as his sons were not capable of running the banking empire. Further disaster struck when, in 1494, the French invaded the city causing the Medici to flee, leaving behind a bank that was already on the brink of bankruptcy. The bank was wound down later that year and is said to have been taken over by the Tornabuoni family. It also meant the end of Florence as the center of European banking. In 1422, the city still had 72 internationally operating banks that were members of the banking guild, but in 1470 this had already fallen to 33 and by 1494 not more than a handful had survived.

Slowly but surely, the balance of power was shifting from the Mediterranean region to Northwestern Europe, particularly to the Low Countries, to modern day Belgium and the Netherlands. There, in chronological order, Bruges, Antwerp and Amsterdam developed into Europe's main financial centers. These cities will be the topic of the next chapters. First we will look at Bruges and Antwerp, the birthplaces of the 'Beurs'.

** The movie Hannibal (2001) made reference to this: a descendant of the Pazzi was hanged from the balcony of the Palazzo Vecchio.*



BRUGES, ANTWERP AND THE BIRTH OF THE 'BEURS'

This chapter takes us to the southern part of the Low Countries, modern day Belgium, to the cities of Bruges and Antwerp. Bruges became the financial center of Northern Europe in the 14th and 15th centuries, while Antwerp experienced its golden age in the 16th, before the city fell into Spanish hands in 1585 and many merchants fled to Amsterdam, which in turn flourished in the 17th century.

Harbor of Bruges,
15th century miniature,
Belgium, Bruges museum.

Bruges was primarily a commercial trading center, where merchants from the two main economic regions at the time, Italy and Flanders, met each other. The Genovese merchants arrived by ship in Bruges in 1277, followed by others primarily from Venice, Lucca, Milan and Florence.⁵⁰ They created one of the first true financial centers of Europe, where a lively exchange of goods and financial services took place on the city's central square, the *Beursplein*. Through Bruges, early Italian financial innovations such as the bill of exchange, giro banking and the corporate structure, were introduced to Northern Europe. Antwerp, a century later, became the global center of the Spanish gold and silver trade, products which the Spanish imported from South America. The city not only was the warehouse of the world in the 16th century, but it was also at the forefront of financial innovation, as the first physical exchange building and the predecessors of modern derivatives were introduced in Antwerp.

Bruges, the bridge between North and South

Modern day Bruges still reminds us of its rich history, which peaked at the end of the Middle Ages. Whereas Italian cities and merchants had dominated commercial trade in Europe, Bruges now became the center of commerce in Northwestern Europe, helped by these same Italian merchants and bankers. This meant that at the beginning of the fourteenth century there were two dominant financial centers in Europe, Florence for Southern Europe, and Bruges for Northern Europe.⁵¹ The main attraction of Bruges was its location. The city was located right between the Mediterranean region, dominated by the Italians, and the Baltic region. The latter was controlled by the Hansard community, a loose cooperation between a number of Northern European cities.

Another development that led to the rise of Bruges was the demise of the annual trade fair in the Champagne region, where merchants from different regions traded goods. As these fairs became less important at the end of the 13th century, regional commercial centers took over their role. Instead of traveling, merchants settled in cities and set up local business branches. In Northern Europe, Bruges was the city that profited most from this development, as many Italian merchants settled in the city.⁵² As in Antwerp at a later stage, foreign merchants, primarily Italians but also Germans, dominated trade and financial services.

The Italian nation houses

The various groups of mainly Italian merchants set up their consulate houses, called 'nations', in the center of the city. These nations were of great importance to the Italian banking families that played a central role in Chapter 2, such as the Peruzzi, Bardi and Medici. The primary functions of the nation houses were to protect the rights of their merchants, and to negotiate favorable terms with the local government.⁵³ For this purpose, the nation houses worked together, arranging special conditions under which the Italian merchants could operate, mainly with respect to shipping regulations, toll tariffs and property protection. For example, in 1319, the Venetians came to Bruges to set up a consulate, but only under certain conditions. Their demands included lower brokerage fees, better regulation of weights and measures, and the freedom to come and go freely.⁵⁴

We know many details about the nation houses of Lucca and Florence, thanks to the survival of two of their statutes.⁵⁵ The Lucchese nation house was governed by a consul, whose duty it was to solve any issues the merchants had with the local government. Membership was compulsory for the city's Lucchese merchants, who were expected to participate in religious activities. In 1378, the Lucchese nation had 35 members, making it one of the largest in the city.⁵⁶ The Italian merchants were indispensable for the growth of Bruges, but acted independently of the local community, both commercially and socially. With the exception of local artists, like painter Jan van Eyck, who painted twice a portrait of the Lucchese merchant Giovanni Arnolfini, the two groups rarely interacted.⁵⁷

The birth of the 'Beurs'

The nation houses of Florence, Genoa and Venice were located near the inn of the family Van der Beurse. Nowadays, in continental Europe we use the words *beurs* (Dutch), *borse* (German), *bourse* (French), *borsa* (Italian) and *bolsa* (Spanish and Portuguese) to describe the stock exchange. Even in Great Britain, the word *burse* was still in use until 1775, even though the London stock market was founded as the Royal Exchange in 1566. The origin of the word *beurs* in this context can be traced back to Bruges. On its central square, the innkeepers of the Van der Beurse family played a central role in facilitating the transactions between different international merchants. Since the early 13th century, the family had operated their inn for five generations. They acted not only as hostellers, but also as brokers between the merchants. The family played such an important role in the trading conducted in front of their hostel that the name Van der Beurse became synonymous with the exchange of goods and financial services, and the square became known as the Beursplein or Beurs Square. The local community played a secondary, but indispensable role in the Bruges money market. Innkeepers, money changers and brokers were mostly local, supporting the merchants trading and banking activities.

In the 14th century, an international money market gradually developed on the city's Beursplein.⁵⁸ Bruges broker tariffs and currency rates appeared in an Italian textbook dating back to as early as 1340, and there were regular publications of different European currency exchange rates around the year 1370.⁵⁹ Historians estimate that by 1400, Bruges had an organized exchange; the predecessor of later physical exchanges in Antwerp, Amsterdam and London. The city benefited from both its geographic location and the large cloth industry in the surrounding region; even the merchants in London and Paris were largely dependent on their counterparts in Bruges. Bruges was, however, not a truly global market where goods and commodities from all over the world were warehoused and traded, as was the case in Antwerp and Amsterdam in the centuries that followed. It was above all a meeting point for merchants from across Europe, mainly from Italy and the Hansard cities.⁶⁰

The rise of Antwerp

Slowly but surely, economic activity shifted to Antwerp, which experienced its golden period in the 16th century, until the Spanish occupied the city in the 1580s. The city profited from the silver and gold that was discovered by the Spanish and Portuguese in South America. But why did Antwerp become Europe's center of trade and finance, instead of, for example, Lisbon or Seville?

The explanation lies in the decline of Mediterranean dominance and the simultaneous rise of the Northern European countries. Italian cities lost their competitive advantage to cities like Antwerp, Bruges and Amsterdam, which were helped by their geographic location. Traders from England, Germany, the Baltic states, the Dutch Republic and the Mediterranean countries came together in what is today's Belgium, helping Antwerp to take over the role of both Bruges and Venice.⁶¹

The 16th century was therefore the age of Antwerp, although some historians called it the 'Age of the Fuggers', after the German banking dynasty that broke down the monopoly of Italian merchants and bankers.⁶² The Fuggers became extremely wealthy as they had a near-monopoly on exploiting the copper mines of central Europe. Copper was transported to other parts of the world through Antwerp. While half of the Fugger's copper was handled in the city between 1507 and 1539, its most famous banker, Jakob Fugger, nicknamed Jakob the Rich, became one of the richest people in history.⁶³

The first period of prosperity in Antwerp started with the arrival of the Portuguese. Before the Dutch and English started to travel the world seas, Portuguese sailors like Vasco da Gama had already explored large areas. The Portuguese king established a permanent consulate in the city in 1508, called the *Feitoria de Flandres*.⁶⁴ For the Portuguese, Antwerp was interesting because of the presence of German merchant bankers such as the Fuggers, as German copper and silver was traded for the spices that the Portuguese explorers bought back from India. Italian bankers were more and more outnumbered by other bankers. The German Fugger, Hochstetter and Welser families became the principal financiers and merchant bankers of Antwerp, although Italian bankers were still present too, especially those from Genoa.

Warehouse of the world

Antwerp became the global center of the spice, textile and metals trade. Pepper, sugar, wine, copper, silver and gold all found their way into the city's warehouses. The Portuguese, however, left the city in 1548 after the Spaniards found enormous amount of silver in Potosi, Peru. They no longer needed Antwerp to do business, as silver could be bought closer to home, mainly in Seville. Their departure meant the end of Antwerp's first golden period, after which Venice experienced a short-lived revival.⁶⁵ The second period of prosperity centered around the Spaniards, who expanded their territory in South America, and therefore needed commodities and goods from all over Europe. Antwerp, due to its central location, was the perfect city to collect wood, grain and tar from the Baltic states, and wool and linen from England and the Dutch Republic.⁶⁶ The Spaniards themselves transported salt, wine, dried fruit, oil and sugar to Antwerp. To cater for the demand for cloth, the Dutch city of Leiden moved its cloth hall to Antwerp in 1552, giving Antwerp a renewed central role.⁶⁷

The city experienced its greatest prosperity between 1535 and 1557, expanding rapidly from around 45,000 inhabitants in 1500 to an estimated 100,000 in 1568.⁶⁸ The Fugger bankers muscled out their Italian counterparts and became the bank of choice for King Charles V to



The city of Antwerp, 1572, engraving from *Civitates Orbis Terrarum*, by Georg Braun and Franz Hogenberg, active in Cologne, Belgium, 16th century. Genoa Pegli, Civico Museo Navale (Boat Museum).

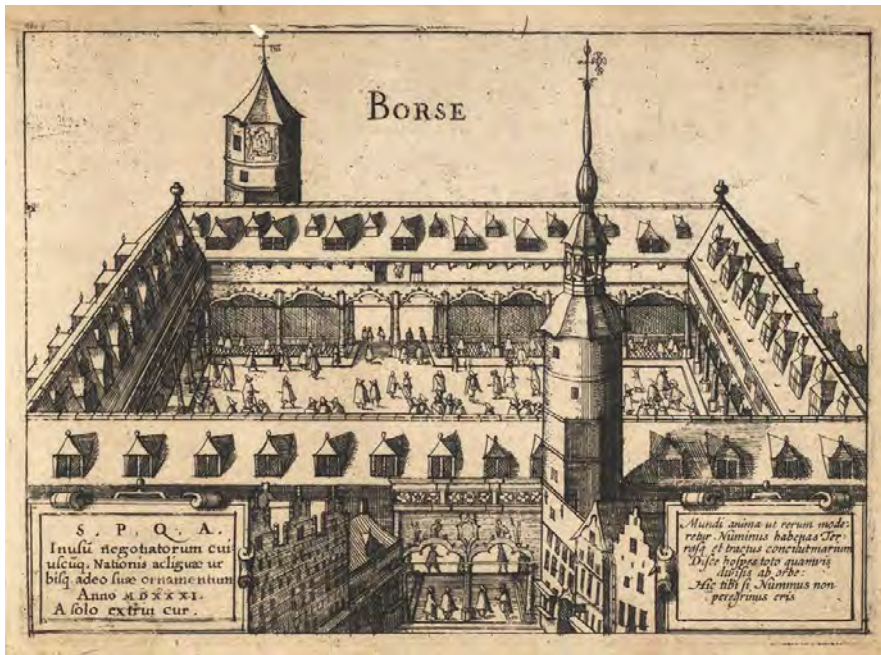
borrow money to finance his wars.⁶⁹ Lending money to war-hungry kings sounds familiar – it was what the Bardi, Peruzzi and Medici family had done centuries before. Did the Fuggers lend money more wisely than the medieval super-companies? Unfortunately, not. The Spanish crown went bankrupt in 1557, one of the many defaults by Spanish kings, dealing a fatal blow to the hegemony of the once almighty Fuggers.⁷⁰ Not only the Fugger bankers suffered; many other banks in the city also collapsed, causing a severe economic recession in Antwerp, and ending its second period of prosperity.

Antwerp experienced a last and brief period of growth in around 1565.⁷¹ After the English cloth producers had left the city and moved to Hamburg, the city decided to focus on small workshops. As a result, the cloth business in the Southern Netherlands experienced a short-term revival, which came to an end with the Spanish occupation of the city in the 1580s, leading to the definite end of Antwerp's golden era.

The opening of the Antwerp Exchange

Although Antwerp was the financial heart of Europe in the 16th century, the city did not have public banks like Genoa, Venice and Amsterdam, or a large banking system like Florence. However, financial capitalism in Antwerp evolved with the use of the bill of exchange and the construction of a commodity exchange, which opened in 1485. This first exchange building, basically a wooden loggia with an inner square, was an important innovation for financial markets. Antwerp's

The Old Exchange in Antwerp, Early 17th century. From a private collection.



physical exchange was built and governed with the explicit purpose of trading goods, spices and commodities, making it basically the predecessor of the stock market exchange, which was founded in Amsterdam more than a century later, in 1602.

The exchange had a board of directors and even police regulations to stop the frequent fights and violence that erupted from time to time, as traders frequently disagreed with each other.⁷² It was deemed too small in 1526 and the city made plans to build a new, bigger exchange, the New Exchange, which was eventually opened in 1531. As the design of the New Exchange was later copied by the great financial centers of London and Amsterdam, it marked another important milestone in the history of financial markets. It was the world's central point for trading spices, commodities, precious metals and bills of exchange.

Violence between merchants remained a problem, also on the New Exchange. The police regulations were revised several times, but this still didn't stop the fights between different groups of merchants. For example, in 1553 English and Spanish merchants clashed with each other twice, leading to large anti-Spanish protests in the city. And not only traders had to be kept under control – even noisy children were banned from the exchange, as were book and cloth sellers. The city constantly had to take measures to control the apparent chaos on the exchange floor, which was open to the public.⁷³

A continuous stream of financial innovation

Both the Old and New Exchange showcase the important role Antwerp has played in the development of financial markets. And the physical exchange was not the only important innovation that started in Antwerp. The city is also seen as the cradle of the modern derivatives market.⁷⁴ Merchants discovered that trading in bills of exchange on underlying commodities was much easier than trading the physical commodities themselves. This use of financial contracts was regulated under King Charles V, in laws that recognized the transferability and negotiability of the bills, leading to trading in forward contracts on precious metals, commodities and spices.⁷⁵

A third innovation in Antwerp at this time was the development of an international money market for government loans.⁷⁶ As in Amsterdam in the 18th century, European kings, primarily from England, Spain and Portugal came to Antwerp to finance their cash needs, eventually leading to the bankruptcy of several banking families such as the Fuggers. While Amsterdam and London grew to become large financial centers in the period 1600-1900, Antwerp can pride itself on having been at the forefront of financial innovation. Amsterdam thrived on the influx of capitalists from Antwerp, while both Amsterdam and London copied the design of Antwerp's New Exchange.

From Antwerp to Amsterdam

The fall of Antwerp in 1585 not only meant the end of the city's golden age, but also a shift in power to the Dutch Republic and especially Amsterdam. As the Dutch dominated the bulk trade in wood, wine and salt between the Baltic and Mediterranean countries, this process had already been underway for a while. After the fall of Antwerp, the Dutch Republic experienced a period of unprecedented growth between 1590 and 1610, laying a strong foundation for the 17th century Dutch Golden Age. In 1602, the Dutch founded the Dutch East Indian Company, the *Vereenigde Oostindische Compagnie*, or VOC, which is regarded as the world's first joint-stock company, making the Amsterdam Exchange the oldest stock exchange in the world. The VOC dwarfed any previous multinationals such as the medieval super-companies and the Medici from Chapter 2.

The city of Amsterdam also founded the Bank of Amsterdam in 1609, a highly successful and stable bank which is regarded by many as the predecessor of the modern central bank. Together with the nearby VOC headquarters and the exchange, this bank formed the heart of the 17th century version of Wall Street, Amsterdam's central Dam Square and its surroundings. The Bank of Amsterdam is dealt with in Chapter 4, while the VOC and the birth of the modern stock market are the subject of Chapter 5. We now travel to the Dutch Republic to take a closer look at how a public bank became the financial safe haven of Europe, how the first stocks and their derivatives were traded, and how investor psychology already played a very important role way back in the 17th century.



CHAPTER 4

THE BANK OF AMSTERDAM AS A CENTRAL BANK OF THE WORLD

The Bank of Amsterdam, which existed from 1609 to 1820, is seen as one of the predecessors of the modern central bank. Through its giro payments, full reserve ratio and its stable bank guilder, the bank became the anchor of the European financial system, consolidating Amsterdam's role as the Wall Street of the 17th century. After the fall of Antwerp in 1585, many Jews and Protestants moved to Amsterdam looking for a safe place to live. The Dutch Republic was known for its religious tolerance, making it a popular destination for various groups of refugees from Antwerp.

The Town Hall on the Dam,
Amsterdam, Gerrit Adriaensz.
Berckheyde, 1693.

The rise of the Dutch Republic

The Republic was an open economy, based on trade with primarily the Baltic region. At that time, the Dutch were known as the mass transporters of Europe, shipping wood from the Baltic states and wine and salt from Southern Europe. Their competitive advantage lay in the fact that they could transport large quantities of bulk goods at very low cost, thanks to low wages and technological advances in ship design and building.⁷⁷ Warehouses in Amsterdam were packed with goods, waiting to be shipped to the places where they were most needed. This kind of trade was very profitable and was nicknamed the *moedernegotie*, the ‘mother of all trades’, in the 16th century. But it was only in the 17th century, helped by the influx of rich and capable refugees, that Amsterdam took over from Antwerp as the main trading and financial center of Europe.

There were three main differences between the two cities. Firstly, Antwerp was more of a city-state like Venice, Florence and Genoa, while Amsterdam was part of the Dutch Republic, together with many other sizable cities such as Haarlem, Leiden and Rotterdam. Secondly, trade and finance in Antwerp were organized around foreign merchants, especially from Italy, while in Amsterdam these were in the hands of the local community of mainly Dutch merchants and bankers. Lastly, Amsterdam’s heyday lasted for more than 150 years, while Antwerp’s lasted for just 50.

Amsterdam was the leading center of international trade and finance, from around 1590 to 1740. The Dutch call the 17th century their Golden Age, as that was the century when this relatively small country basically came to rule the world, on both land and sea. Dutch colonies in today’s Indonesia, New York state (with Nieuw Amsterdam, later renamed New York City), the Caribbean, Suriname and Brazil all proved to be sources of massive profits, making the Dutch Republic by far the wealthiest country in the world. In today’s Amsterdam one can still see the well-preserved physical remains of the Dutch Republic’s extreme wealth during this Golden Age, especially along Amsterdam’s UNESCO-protected canals.

Somewhat miraculously, especially given the fact that it had only two million inhabitants during the Golden Age, the Republic maintained its dominance for more than a century. Far bigger countries such as England and France (5 and 21 million inhabitants respectively) tried to undermine Dutch power on numerous occasions.⁷⁸ The English went to war four times with the Dutch, while France resorted to trade barriers and protectionism. Most merchants in England and France, however, felt unhappy with their governments’ measures, as they needed the Dutch merchants and bankers in order to effectively conduct their own business. The countries hated each other, but couldn’t do without each other either. This love-hate relationship between the Dutch and the English is further illustrated in Chapter 6.

The influx of immigrants from Antwerp launched the start of a period of unprecedented growth in the Republic and led to several financial innovations. Over 20 years, the Dutch East India Company (VOC) stock was first traded in 1602, followed by the launch of the Bank of Amsterdam in 1609 and the new stock exchange building, which opened in 1611. In 1614, the city’s pawn

bank (*Stadsbank van Lening*), which still exists today, was founded, and in 1615 a new grain exchange was opened. This chapter focuses on the Bank of Amsterdam, as it played such an important role in Amsterdam's development as the leading international financial center in the 17th century.

Bad money driving out good money

As the Dutch Republic was a small and open economy, the country had to cope with many foreign currencies: virtually every large European city minted its own coins, leading to hundreds of different types. An overview drawn up by the Dutch States General in 1606 lists no fewer than 341 silver and 505 golden coins – which made doing international business very complicated.⁷⁹

Another problem was so-called coin clipping. People trimmed gold and silver off the coins, making them smaller and then used it to make new coins, debasing the currency and causing an effect similar to inflation. Merchants therefore hoarded the 'good' coins and, when they carried out transactions, tried to dump the 'bad' ones for their nominal value. Eventually, these 'bad' coins were the only money in circulation. This phenomenon of 'bad money driving out good money' is known as Gresham's Law, after Sir Thomas Gresham, the 16th century founder of the Royal Exchange in London and chief financial advisor to the English crown.⁸⁰

The city of Amsterdam was aware of the problem of so many debased currencies in circulation, and founded the *Amsterdamsche Wisselbank*, literally the Amsterdam Exchange Bank but more commonly known as the Bank of Amsterdam. This new bank wanted to put an end to both the currency chaos and also tackle profiteering by small money changers. As early as 1604, the city prohibited the activities of the moneychangers, but after merchants argued that they were much needed, they were allowed back in business. The city was still highly dissatisfied with their practices and set up a commission in 1606 to investigate the feasibility of a central payments bank. Their example seems to have been the Venetian Banco di Rialto, a highly stable bank responsible for settling financial transactions in Venice, while keeping a 100% reserve ratio.

The Bank of Amsterdam opened its doors on 15 February 1609 in the city hall, today's royal palace, on Dam Square. Its charter was clear: the bank wanted to end all confusion and accusations regarding the different coins, to facilitate the merchants trading in the city and to create order in the currency chaos. From then on, every transaction above 600 guilders had to be settled via the books of the bank and money changers were no longer allowed to handle such large sums.



Completion of the Amsterdam Stock Exchange, 1608-1612, anonymous. Silver commemorative coin. Front: the recently established stock exchange surrounded by an inscription. Reverse: inscription above a crossed staff of Hermes and an olive branch.

The Bank of Amsterdam as the ultimate safe haven

How did the bank operate in practice? Fairly simply, in fact. Merchants deposited their coins at the bank, and the bankers determined their value and credited the merchants' account for the same amount of bank money, after charging a small fee. The coins were safely stowed in the vaults of the bank and remained there, as the bank had to maintain a 100% reserve ratio. The bank also accepted 'bad' coins, but melted them down to make new ones. This was all intended to ensure the city was able to clean up monetary circulation as much as possible.

This was also a pretty good deal for the merchants, as bank money could not be manipulated and it was no longer necessary to exchange real coins. The system of bank accounts and giro payments created a safe, cheap and highly convenient way of carrying out financial transactions. For example, prior to this, exchanging 600 guilders had required some nine kilograms of silver. But under this new system, two merchants settling a transaction simply saw a debit and a credit entry on their bank account, administered by the bank. Furthermore, the City of Amsterdam guaranteed the deposit in the event of fire or theft.

Bank guilders eventually became the world's most used currency at the time, similar to the role the US dollar has today. Because of its convenience and safety, bank guilders normally traded at a premium to normal guilders, known as the agio. The stability of the bank guilder, the 100% reserve ratio, the convenience of giro payments and the low transaction costs made the Bank of Amsterdam a success from the start. The bank had opened around 730 accounts in no time.⁸¹ And at its height, around 1720, it administered almost 3,000 accounts for merchants from all over Europe.⁸² The year 1720 was characterized by financial turmoil in England, France and the Dutch Republic, as described in Chapter 7, and the Bank of Amsterdam was seen as a monetary safe haven.

Withstanding crises and corruption

However, the bank came under severe pressure in 1672, known as the Rampjaar (Disaster Year), because of the Republic's simultaneous wars with England, France and two German kingdoms. Fearing the demise of the Dutch Republic, merchants withdrew their guilders from the bank en masse. As a result, the bank's balance fell by 34% in just two weeks, from 7.6 million to 5 million guilders.⁸³ Nowadays, such a bank run would take down almost any institution, but its full reserve ratio saved the Bank of Amsterdam. Furthermore, it was evident that many coins had suffered minor damage, caused by the city's great fire of 1652, which was the ultimate proof that the money really had been really safely stowed away in the bank's vault.⁸⁴

Even though the bank was a solid institution, from time to time it had to cope with corruption. In 1673, Rutger Vlieck, the bank's accountant, admitted that over a period of 20 years he had embezzled around 300,000 guilders, an enormous amount for the bank, equal to five times its profit and 15% of its capital.⁸⁵ Vlieck was publicly beheaded in front of the bank on a crowded Dam Square. A century later, in 1775, the bank discovered that another accountant, Hendrik Grauwhart, had forged client signatures to transfer money to his own accounts. He died before he received his death penalty.



Poem at the Hendrik de Keyser stock exchange, Cornelis Visscher (II) (rejected attribution), 1643. Poem by Joost van den Vondel.

The world's first central bank?

In order to attract more business and clients, the bank took a revolutionary step in 1683. It started issuing tradable receipts (recepissen) for the gold and silver that was deposited at the bank. These receipts made it easy for merchants to buy and sell precious metals, to park their gold and silver and to speculate on the price of it. Paper notes backed by gold and issued by a central bank; sounds familiar? It should, because this was basically paper money, although not yet officially.

This step had a positive influence on the bank and reinforced Amsterdam's position as the central trading hub of the world. It is estimated that half of Europe's imported gold and silver, primarily from South America, moved through Amsterdam. The inventory of precious metals doubled in the decade after the introduction of the receipts and the number of clients increased by 25% after 1683.⁸⁶ The receipts were undoubtedly a big success and have been the subject of research by the American academics Quinn and Roberds, who work for the US Federal Reserve in Atlanta. In their research, they draw comparisons between the Bank of Amsterdam and later central bank activities such as open market operations, central bank repurchase agreements and emergency liquidity facilities.⁸⁷

Perhaps not surprisingly, many scholars regard the Bank of Amsterdam as the predecessor of the modern central bank. But is this view justified? Not entirely perhaps, as there are also plenty of arguments against it. The bank never issued real bank notes, it did not officially control the monetary supply, it did not lend money to private banks, and it was not officially a lender of last resort. Still, the similarities with today's central banks are striking. The bank's vault, full of gold and silver, served as the anchor for the Dutch economy, and given its central role in international finance, for the European financial system too.

The receipts introduced in 1683 were also pretty similar to modern paper money. They were backed by gold, tradable and exchangeable for gold at the bank. They enabled the bank to have some control on the money supply in the city, also the role of modern central banks. And what about the role of the bank guilder? Due to its stability, it developed into the main international reserve currency, having a similar role as the US dollar today. In the financial turmoil of 1720, the bank and its currency served as an anchor and safe haven for European merchants and investors.

The Bank of Amsterdam never fully achieved its original goal of putting an end to the city's currency chaos. It could not issue coins itself, and no fewer than 14 different minting houses in the Dutch Republic continued to mint their own coins. So the chaos continued and moneychangers still played an important role in the financial ecosystem of Amsterdam. Nevertheless, the Bank of Amsterdam was a great success. Its system of bank accounts and giro transactions, the stable paper currency it introduced and its full reserve ratio reinforced Amsterdam as the principal financial center of Europe in the 17th century.

The demise of the Bank of Amsterdam

In order to maintain a full reserve ratio, the bank was not supposed to lend out money. Companies and individuals in need of cash were supposed to go to the private banks in the city or to the pawn bank, the Stadsbank van Lening. This bank was set up by the city in 1614, based

on the model of the Italian charity banks called *montes*, as described in Chapter 1. However, it was simply too tempting to have a public bank with a vault full of gold and silver and not use these reserves in times of need. Four institutions in particular borrowed money from the bank: the Dutch East India Company (VOC), the province of Holland, the Stadsbank van Lening, and the City of Amsterdam itself. Lending to one of the four – the VOC – became a problematic and significant issue when the company entered a rough patch in the 18th century.⁸⁸

The VOC was governed by the rich upper class in the city, the same men that governed the Bank of Amsterdam, which led to several conflicts of interest. Lending to the VOC began on a small and temporary basis, but this changed in 1682 when the company needed more money. The VOC never issued new shares after its IPO in 1602, and therefore largely depended on borrowing money from investors and from the Bank of Amsterdam, against the bank's policy. This lending to the VOC took on a permanent character in 1682, when the Company was given a continuous credit facility of 1.7 million guilders. In 1698, this amount was increased to 3.2 million. In the 18th century, the bank became an important lifeline for the VOC, which embarked on a turbulent period for a number of reasons, primarily because of increased competition and incompetent management. By 1743, its loan had reached 7 million guilders, but the VOC was still able to repay its debt on time.

However, this all changed after the start of the fourth Anglo-Dutch war in 1780. By then, the Dutch Republic's heyday was clearly over and England emerged as the new world power. The VOC was in trouble too, and with it, the Bank of Amsterdam. The Company could simply not survive without borrowing, which put a huge strain on the banks' reserves. When its clientele found out in 1790 that the bank's full reserve ratio was far from 100%, confidence evaporated, signaling the beginning of the end of a once mighty institution. The bank continued as an insignificant and struggling institution until it finally closed its doors in 1820. Its role was taken over by De Nederlandsche Bank, today's Dutch central bank.

The VOC was wound up in 1799, another sign that the glory days of the Dutch Republic were over. The Company, which was founded in 1602, is regarded as the world's first joint-stock company, thus making the Amsterdam Exchange the oldest stock exchange in the world. The VOC and the birth of the modern stock market are topics covered in Chapter 5. We remain in the Dutch Republic and take a closer look at how stocks and their derivatives were traded, how modern financial techniques were developed and how investor psychology already played a very important role.



CHAPTER 5

THE BIRTH OF THE STOCK MARKET

The first joint-stock company was founded in 1602 in the Dutch Republic, making the Amsterdam stock exchange the oldest in the world. It developed into a lively market with trading in shares, forward contracts and options, characterized by trading techniques and investor behavior that feel surprisingly modern. Short selling, insider trading, market manipulation, bear and bull markets, greed and fear: these first stock market investors were essentially not that different from today's investors.

Courtyard of the Exchange
in Amsterdam, Emanuel
de Witte, 1653, The Amsterdam
Stock Exchange designed by
Hendrik de Keyser.

The wide span of the Dutch East India Company

The story of the stock market starts with the story of the VOC (Vereenigde Oostindische Compagnie), the Dutch East India Company. The VOC was founded in 1602, existed for 200 years, and was unprecedented in its scale and power. In its lifetime, the VOC sent almost one million people to Asia and employed on average 30 thousand workers, who mostly worked on one of the 4700 shipping voyages the company undertook.⁸⁹ It sent as many people overseas as all the other European seafaring nations like England, France, Spain, Portugal and the Nordic countries put together, and accounted for 45% of the voyages to Asia between 1500 and 1800.⁹⁰ The VOC dwarfed every previous medieval version of a multinational. As the name suggests, the company conducted business in Asia, particularly in today's Indonesia, but also in China, Japan, Taiwan and India. While the company's main focus was first and foremost on the spice trade, the company also traded in textiles, gold, silver and even elephants.⁹¹

To finance the long and hazardous expeditions, the company needed capital, and lots of it. No family or group of merchants could raise that much capital on its own, so it was time for a new structure, one that would eventually lead to the birth of the stock market. The VOC was created through a merger of several so-called voorcompagnieën, smaller companies from different Dutch cities, that were already embarking on expeditions to Asia, the first in 1595. The Dutch Republic's visionary leaders, such as the leading statesman Johan van Oldenbarneveldt, thought that these companies should work together rather than compete with each other. Later, the VOC became the only Dutch company allowed to do business in Asia, backed by the government, which supported the company with military power. This was necessary to gain and maintain its dominance in the Asian spice trade, as the company not only competed with the English and Portuguese expeditions, but it also had to deal with the local residents in the different Asian countries.*

On March 20, 1602, the States General signed the company's founding act. It consisted of six 'chambers', of which Amsterdam was the biggest. However, the other five cities – Middelburg, Enkhuizen, Hoorn, Delft and Rotterdam – had a combined majority on the board of seventeen directors, as they were afraid the Amsterdam chamber would become too dominant. Dutch citizens were encouraged to become shareholders by subscribing for shares via one of the VOC registers, which closed in August 1602. The company didn't issue physical shares, so investing in the VOC simply meant an administrative booking, with a commitment to pay the amount in several installments after the closure of the subscription period. These installments were what first caused the ownership of the shares to change hands, essentially creating the first ever stock market transactions.

The first stock market transactions

In his excellent book called *The World's First Stock Exchange* and which serves as the primary source in this chapter, historian Lodewijk Petram, who wrote his PhD thesis on the subject of the first stock market, mentions Jan Allartszoon from Amsterdam, who subscribed for two shares worth 3000 guilders. However, when the first payment was due on March 3, 1603, he was unable to find the money and was forced to sell his shares to two ladies, at a price of 106.50%, which indicated a

** The way the company used violence to conquer certain parts of Indonesia, helped by governmental military support, still remains a delicate topic today. Dutch sentiment about the company varies between pride about what it achieved businesswise, to shame about the colonial crimes it committed. The company directors regarded military intervention as a necessary part of building up the business. For example, the company's best-known general, J.P. Coen, wrote that 'trade without war is not possible, neither is war without trade'. Illustratively, in January 2018, the J.P. Coen school in Amsterdam announced that it would change its name due to Coen's history of violent actions.*

profit of 6.5% in six months.⁹² More transactions followed. In 1605, a total of 153 transactions were registered, amounting to 7% of the company's initial capital of 6.4 million guilders. Five years later, 409 shares changed hands worth a total of 24% of the company's capital. Later on, in 1672, a disastrous year for both the VOC and the Republic, 1604 transactions amounting to around 140% of the VOC's capital were carried out, according to Petram.

Dissatisfied shareholders

Like most modern stocks, the VOC's share price was quite volatile. Things started well and the price rose to 140% in 1606, and to as high as 200% after false rumors that the city of Malacca had been conquered, supposedly giving the Dutch control of the Strait of Malacca, an important sea lane close to Indonesia.* But in the years that followed, the stock experienced severe setbacks, eventually falling all the way back to 130% in 1620. It wasn't surprising that investors started to complain. The company didn't pay out any dividends, it was not clear whether it was profitable, and it spent considerable sums of money on military operations fighting the English and the Portuguese in Asia. In 1613, fourteen shareholders officially protested about these expenses, but this had little effect.

** Malacca was conquered eventually, in 1641, and remained under Dutch control until 1795.*

In April 1610, the company finally paid out its long-awaited first dividend. But again, the shareholders were not happy, and for good reason. Because the VOC badly needed to use its capital overseas, it decided to pay out dividends in spices. Every shareholder received 75% of the nominal value of their holdings in mace. Percentage-wise, this was a good dividend. This was followed by a 50% dividend in pepper in November and finally, 7.5% in hard cash in December.⁹³ But because of the sudden abundance of these spices on the market, the real dividend in cash terms turned out to be lower for most shareholders.⁹⁴

In total, the VOC paid out a total of 200% in dividend in the period between 1602 and 1622.⁹⁵ Not bad for a start-up company! However, its shareholders were far from impressed. Inflation ran at 6%, they had no idea whether the company was making good profits and in 1612 they were asked to participate in an insurance program to guarantee the continuity of the company.⁹⁶ As the company didn't issue any additional capital after its 1602 IPO, it had to borrow money from different sources. From 1622 onwards, the company issued six-month bonds to finance its short-term operations.⁹⁷ Later on, it started to borrow money from the Bank of Amsterdam. In the 17th century, as the company was generally in good shape, these debts were repaid in time and didn't create a problem for the VOC and its creditors. Moreover, things started to improve in the 1620s. The company was growing fast, profits were rising and dividend payouts became more structural from 1630 on.⁹⁸

The first short squeeze

The fledgling stock market didn't have to wait long for its first short squeeze. The central figure in this was Isaac le Maire.⁹⁹ He was one of the directors and largest investors, with capital of 98,000 guilders, when the VOC was launched in 1602. He was born in France, earned his early fortune in Antwerp and moved to Amsterdam when the Spaniards occupied the southern Netherlands. Seven years later, Le Maire set up the first short selling consortium in history, seeking to secretly profit from a falling VOC stock price.

What had happened to make one of the directors and largest shareholders turn against his own company? That fact was that Le Maire had ceased to be part of the VOC when he was forced to sign a letter of resignation in February 1605. He was accused of fraud and the company no longer wanted him to be involved. An angry Le Maire was determined to oppose the VOC in every way from that moment on. He even made plans with the French to found a competitor – the French East Indian Company, but the death of King Henry IV in 1610 put an end to his plans.*

However, he discovered a much easier way to disrupt the company: by betting against the VOC's share price, using derivatives such as forward contracts. Forward contracts were very convenient, as they still are today, because they enable investors to take large investment positions using only a small amount of capital. The use of forwards also meant that VOC investors didn't have to go to the company's headquarters to administer every transaction. Forwards were already in use in the 16th century grain markets of Antwerp and Amsterdam. For Le Maire, the VOC share forward contract was the perfect instrument to implement his plan to spread false rumors, bring down the share price and then profit from its decline. For this purpose, he set up a syndicate in February 1609 with eight investors and called it the Groote Compagnie (big company). Not only did they spread false rumors about the company, they also resorted to straightforward fraud, helped by the VOC accountant Barent Lampe, who made false entries in the VOC share records.

Initially, the syndicate made nice profits, as the VOC shares declined, hitting a low of 126% in January 1610.¹⁰⁰ This was reason enough for the directors of the VOC to complain to the States General that short sellers were the cause of the decline, and to call for a ban on outright short selling. The traders, of course, opposed this. They protested that the stock price decline was simply the result of bad news from Asia – such as the loss of two islands and the sinking of several ships. It was no wonder the stock price was collapsing, this had nothing to do with them.

Their protests failed. On 27 February 1610, the world's first ban on outright short selling of stocks came into effect, although the use of forward contracts was still allowed. A few months later, Le Maire's syndicate fell apart and several of its members declared themselves bankrupt.¹⁰¹ News about the company had also improved dramatically, and ships were returning loaded with rich cargos. The stock price rebounded, helped by the announcement of the payout of the first dividend later that year. For Le Maire and his companions, this was of course bad news, leaving them with large losses, as they fell victim to the stock market's first short squeeze.

The early days of stock market activity

In the few first years after the VOC shares were launched, the Nieuwe Brug (new bridge), close to Amsterdam central train station today, was the place where most traders gathered for the latest company news and stock prices.¹⁰² In 1607, the city started the construction of a new exchange, modelled on the Antwerp exchange of 1531. This building, which was demolished in the 1830s because it was in such poor condition, was located on the Rokin street, close to the Bank of Amsterdam, where most traders had their accounts. Trading at the exchange started in July 1611.¹⁰³

** Le Maire eventually founded the Australische Compagnie. In 1615, two of this company's ships, under the command of his son Jacob, sailed westward, hoping to find an alternative route to Indonesia, and hoping to discover the mythical Zuidland (Australia). After a journey of 17 months, they did reach Indonesia, where their possessions were confiscated by the VOC, triggering a lawsuit between Le Maire and the VOC. The sea straits near Argentina called Le Maire Strait and Cape Horn (named after Dutch city of Hoorn) still remind us of Le Maire's journey.*



The first holders of VOC shares were mainly long-term buy-and-hold investors, but this gradually started to change. The use of forwards, and later options, enabled investors to speculate on stocks, and especially after 1630 a lively stock market developed. The influx of Jewish merchants and traders after 1640, fleeing from Portugal, was also a huge stimulus for Amsterdam's stock market activity. These traders had an enormous network in other European commercial cities like London, Antwerp and Hamburg and used it to their advantage. The growth of stock market activity also meant that the intimate atmosphere, where traders trusted each other, evaporated. By around 1670 most trading took place in membership-only clubs such as De Plaetse Royael, an inn on the Kalverstraat, which was the home base of the *Collegie van Actionisten*.¹⁰⁴

The Paalhuis and the Nieuwe Brug, Amsterdam, in the Winter, Jan Abrahamsz. Beerstraten, 1640 - 1666.

In this period, stock trading took place at four different locations, according to Petram. In the morning, Jewish speculators traded in their own district to the east of the city center, as the exchange didn't open its doors until noon. After the exchange closed for the day, the speculators moved to their clubs to trade in the evening, with the Dam Square as an additional trading location,

especially outside exchange opening hours.¹⁰⁵ From 1660 on, the trading in clubs led to so-called *rescontre* days, very similar to today's expiration days for stock derivatives such as options and futures. On the *rescontre* days, traders settled their contracts with each other and netted payments where possible. This quarterly cycle repeated itself in February, May, August and November, and offered several advantages as it simplified trading and settlements, using standardized contracts.¹⁰⁶

A modern investment book from 1688

Together with the launch of the stock market came the first book on equity investing, 'Confusion de Confusiones', which is a remarkable book.¹⁰⁷ The Financial Times included the book in its list of the top ten best investment books of all time, and for good reasons. It is the first book of its kind, and gives us an excellent insight into the practices of the stock market around 1688, especially on investor behavior and speculators' tricks. The author was the Portuguese, Amsterdam-based merchant and poet Joseph de la Vega, who lost a fortune on the stock market himself. The book is written as a dialogue – quite a common format in the 17th century – between a stock trader, a merchant and a philosopher. The four dialogues in the book cover different subjects, such as the techniques used by traders, the reasons for stock price fluctuations, the mechanics of the markets and above all the game's speculative elements, often caused by false rumors, fake news and shrewd traders.

The book feels remarkably modern as investor behavior, like human nature, hasn't changed over the last 300+ years. It is perhaps not surprising that some academics regard the book as the first treatise on behavioral finance, as the author mainly talks about the rational and irrational actions of shareholders and traders.¹⁰⁸ The whole game, as de la Vega calls it, is rife with herd behavior, overconfidence, excessive trading, market manipulation and regret aversion.

"The most noble and falsest business in the world"

The main character in the book, the stock market trader, starts the dialogue in style with a confusing statement. He paradoxically refers to the stock market as the most noble game in Europe, but at the same time "the falsest and most infamous business in the world", referring to the speculators stock trading games as sometimes deceitful. Nothing describes the mood swings of the trader better than this statement, as throughout the book he walks a tightrope between euphoria and sadness, between greed and fear. And the same applies to his companions, the merchant and philosopher, although describing them as companions overstates the relationship between the three. In several instances in the book, the three seriously disagree with each other, and the philosopher in particular repeatedly declares that he doesn't want to be involved in these games full of tricks and intrigues. But he still rejoins the discussion as he too is interested in making money after all.

The philosopher and merchant are intrigued by the trader's rather bold statement that it is possible to get rich on the stock market without taking risks. The philosopher is skeptical about this and says that only the devil could make such a promise. He is hesitant about becoming involved in such an uncertain game, where, as he states, every breath of wind can cause a

storm. The trader also tries to convince them that they should use options and gives a detailed description of call and put options.

17th century investor psychology

In the second conversation, the philosopher asks the trader what causes stocks to move up down, a very valid but difficult question. The trader answers that the more you look at it, the less you will understand it. Not very helpful advice for the newcomers, but fortunately he gives a little more detail on this later on. The stock price, he states, depends on the situation in Dutch East India and in Europe as well as the mood of investors. In other words, stocks move as a result of both fundamental news and investor behavior, an opinion that is shared by most modern stock market investors.

The rest of the second dialogue mostly focuses on investor behavior, serving as a good guide to behavioral finance, if the reader can look beyond the frequent biblical and mythical allegories. He colorfully describes how the mood of investors can change quickly from euphoria to fear and back, and he finally gives some sensible investment advice: to become rich in this game, you need patience. Stock prices are unstable, rumors are seldom true, and only people who have the courage to stay put, will survive and win in the end.

The author also writes about bullish and bearish investors, but is clearly against short sellers, who he feels are driven by fear and uncertainty. He advises his readers to be bullish by nature, and only selectively bearish – not a bad advice for the long-term stock investor! More specifically, he states that VOC investors shouldn't be put off by high stock prices, as the company is continuously growing and interest rates are declining. Furthermore, he emphasizes that investors simply don't have an attractive alternative to invest in – a frequently cited explanation in bull markets.

De la Vega also correctly saw that stock price movements were mainly driven by expectations, not by revenues and profits. Richly laden ships returning safely were good news, but this was probably already reflected in the stock price, indicating that the market was pretty efficient. After this monologue by the trader, the philosopher, although enthusiastic about his narrative style, isn't so sure whether stock investing is his cup of tea. To him, investing seems contradictory as sometimes it's better to buy, sometimes to sell and the circumstances for both are highly uncertain. However, the merchant is fed up with the tone, which he finds elitist, something the trader makes light of.

Tools to trick the stock market

In the third dialogue, the philosopher states he is deeply unhappy and desperate; after the trader's investment advice, and against his own beliefs, he had decided to invest the night before. Due to his lack of experience, he bought stocks at too high a price, causing laughter among the stock brokers. Although the trader is sure the transaction can be reversed because of the high price, the philosopher feels that cancelling the trade would be disgraceful, much to the dissatisfaction of the trader.



Dutch Ships Becalmed,
Willem van de Velde (II), c. 1665

The fourth and last dialogue starts with the trader telling the two others that stock prices have crashed because of the disappointing revenues generated by returning vessels. Both the merchant and philosopher are shocked. How terrible – all their money gone, options worthless, they are finished! Their overreaction perfectly fits in with the tone of the book, which feels more like a play. Petram rightfully emphasizes that the book focuses disproportionately on all the tricks used by speculators. The author sums up no less than 12 different ways they use to try to outsmart other investors. Most of the tricks focus on market manipulation, such as spreading false rumors, cornering the options market, and using friendly brokers to fool other investors. Many of these practices are deemed illegal nowadays, but in the first decades of stock market investing, regulation seems to have been light.

Despite their skepticism, large losses and different personalities, the three characters in the book depart as friends. The merchant and philosopher are glad they learned about the stock market, but also conclude that it's a difficult game to play. 'Confusion de Confusiones' is nothing short of a remarkable and ground-breaking book. It was written several centuries before other books on stock markets were published, making de la Vega a real pioneer.

The boom and bust of the VOC and its stock price

Over the almost 200-year life of the VOC, the stock price went through several boom and bust cycles, as one would expect. Overall, the value of VOC stock was a good barometer for the power of the Dutch Republic: rising in the 17th century, especially between 1620 and 1670, and gradually declining in the course of the 18th century. The first real stock market crash happened in 1672 when investors were taken by surprise by English, French and German attacks on the Republic, trying to bring an end to the Dutch hegemony. A year earlier, the stock price had reached a 17th century high of 566 in early July 1671¹⁰⁹, and investors were probably euphoric, something which often happens just before financial disaster strikes. Because of the attacks on the Dutch Republic, the market crashed, with the stock price falling by a whopping 49% in 1672, to a low of 290 on 20 July.¹¹⁰ Once the Republic was able to hold off the attacks, the stock price recovered.

In 1688 the second crash took place. War fears, this time with France, caused many investors to lose their shirts, and some even lost their minds. Diplomat Coenraad van Beuningen, who had several high political positions but was also mentally unstable, lost a fortune in the 1688 crash. The traces of this breakdown seem to be still visible on the front of his house in Amsterdam, where he is said to have scrawled messages in his own blood.¹¹¹ There were of course ups and downs, but the general stock price trend in the 17th century was up, while in the 18th century the stock gradually fell, as the company's situation worsened. Competition increased, the management became weak and England started to outshine the Dutch Republic, helped by a Dutch king ironically enough, as we will see in the next chapter.

After 1730 the position of the VOC structurally weakened. Competition from the English East India Company increased, the cost base in Asia became too high, the management turned out to be increasingly incompetent and sometimes outright corrupt, innovation came to a standstill, and the simplistic accounting methods made it unclear which divisions were profitable and which were not.* Slowly but surely the company was turning into a slow and unprofitable mammoth. It did, however, continue to pay out good dividends to satisfy its shareholders, up to a point where dividends exceeded profits. This was clearly a short-term strategy and couldn't prevent the stock price from falling, from around 760 in 1733 to eventually 300 in 1780.¹¹² In that year, the Fourth Anglo-Dutch War broke out, dealing the company a fatal blow. It became difficult for ships to reach their home ports, and revenues dropped dramatically. The VOC suffered acute cash flow problems, was burdened with enormous debts and eventually had to be nationalized. The company charter expired on 31 December 1799, signaling the end of a once-mighty multinational that had firmly made its mark on Dutch history.

** The VOC's nickname became
Vergaan Onder Corruptie
(Perished Under Corruption).*



CHAPTER 6

ANGLO-DUTCH FINANCE AND THE LONDON IPO CRAZE OF THE 1690s

Towards the end of the 17th century, the relationship between England and the Dutch Republic deepened but also became more complicated. The Dutch Republic gradually lost its dominant economic position as England took over this role. Ironically, it did so with the help of the Dutch William III, nicknamed William of Orange, who became King of England in 1688.* The so-called Glorious Revolution, and the resulting Financial Revolution, brought these two countries with their long history of love and hate, of admiration and war, further together.

** Not to be confused with the other William of Orange (Dutch: Willem van Oranje), who is better known in the Netherlands and who led the Dutch revolt against the Spanish in the 16th century, after which he was given the nickname 'Father of the Fatherland'. The Dutch national anthem was written in his honor.*

Bust of King-Stadtholder
William III, De Metaale Pot
(attributed to), c. 1695 -c. 1700

William III, together with his wife Mary Stuart, ruled Britain, and introduced Dutch financial techniques that were then successfully implemented on the London financial market. This ‘Dutch finance’ caused a number of changes to the English financial markets, ultimately resulting in the first IPO craze in the 1690s, when dozens of new companies were floated on the London Stock Exchange. The 1690s boom bears a striking resemblance to the 1990s IT bubble, both resulting in the same valuable lessons for investors.

Going Dutch in London: The Anglo-Dutch love-hate relationship

Throughout the whole of the 17th and 18th centuries, relations between England and the Dutch Republic seesawed between love and hate. The two countries fought no fewer than four wars, three of them between 1652 and 1674, and one that started a century later in 1780. In the 17th century, the English admired and envied the Dutch for their financial innovations, shipbuilding, commercial methods, and above all their creditworthiness. Because of it, the Dutch could borrow at much lower interest rates, which benefited merchants and helped their cities and provinces refinance their debt more cheaply. The English statesman Sir George Downing complained that the Dutch borrowed at 3 to 4 percent, while the English had to pay double that, giving the Dutch an important competitive advantage.¹¹³ Another important statesman, Sir William Temple admired the Dutch for their disciplined debt repayment, which enabled them to borrow large amounts at low costs, while Josiah Child, director of the English East India Company, also pointed out that interest rates for the English were twice as high as they were for the Dutch.¹¹⁴ The English writer and trader Daniel Defoe referred in 1728 to the Dutch as the carriers of the world and brokers of Europe.¹¹⁵

This envy often developed into full-blown hatred between the two countries. Dutch commercial letters were full of sharp comments about the English, while the English used degrading expressions when referring to the Dutch, some of which are still used today:¹¹⁶

- Expressions like going Dutch, a Dutch treat, Dutch date, Dutch ride, Dutch party, Dutch wallet and Dutch generosity ridiculed the perceived stinginess of the Dutch.
- Dutch courage, a Dutch headache and a Dutch agreement all refer to the stereotyping of the Dutch as heavy drinkers in the 17th century.
- Furthermore, a Dutch uncle was the opposite of a nice, friendly one, while a Dutch widow practiced the oldest profession in the world. Dutch comfort means things could have been worse, while going the Dutch route meant to commit suicide.

Still, the countries couldn’t do without each other either. In the 17th and first half of the 18th centuries, the English needed Dutch services and ships, while the Dutch needed English merchants as clients. Transportation over sea was often easier than over land and Amsterdam and Rotterdam were physically closer to London than the remote parts of England and Scotland were. In the 18th century, Rotterdam came to be known as ‘Little London’ as the two cities were so well connected by sea that many English merchants moved to Rotterdam. English colonial goods such as tobacco, tea, coffee and rice were often traded through Amsterdam or bought by Dutch merchants. In 1688, the relationship between England and the Dutch Republic entered a revolutionary stage, which some historians even call one of the defining moments in world history: The Glorious Revolution.¹¹⁷

The Glorious Revolution of 1688

The sequence of events in 1688 is known as the Glorious Revolution, and is generally not regarded as an invasion. So what happened during this revolution, and why was it glorious? Or was it actually an invasion after all? And why was it important for the development of financial markets?¹¹⁸ To answer these questions, we turn to the Dutch Republic and their troubled relationship with the French. To curb the Dutch Republic's commercial domination, the French had once more resorted to heavy trade barriers, which infuriated the Dutch States General. War seemed inevitable. However, much hinged on which side the English would choose: if they chose the French, it would be 1672 all over again, two large countries attacking the Dutch Republic, possibly meaning the end of Dutch dominance.

Invading England, on friendly terms, would solve these problems. England wouldn't turn against the Dutch Republic as it did in 1672, and a joint army stood a good chance of success against France. The English people were likely to support William of Orange as their king, as he was protestant and married to the English Mary Stuart, the daughter of James II, who had plans to turn England into a Catholic state. The Dutch envisioned an invasion without bloodshed, William would become King of England and the Dutch Republic would have a new and powerful ally. However, as the English and Dutch were still bitter trading rivals that had fought three wars quite recently, William wasn't so sure how easy it would be to win the support of the English people. So the States General carefully launched a campaign in England to drum up enthusiasm among the English for a friendly invasion. They also revealed their plans directly to seven influential English statesmen, who assured them that they would offer their support.

The Dutch assembled a fleet and an army in no time, according to some historians one of the most impressive formations of all time, consisting of 21,000 soldiers.¹¹⁹ The fleet, which was four times bigger than the Spanish Armada of 1588, reached England in November 1688. The initial English reaction was mixed, but ultimately positive. On 18 December, the Dutch marched into a London already abandoned by the incumbent King James II. For months, the Dutch were the only forces in town; William controlled England's finances, fleet and army. Crowned as King of England in 1689, he reigned together with his wife Mary Stuart until his death in 1702.

Dutch Finance and the English Financial Revolution

Most historians attribute the term 'glorious' to the absence of bloodshed in the series of events described above. But why is the Glorious Revolution relevant for the history of financial markets? Economists also refer to the Glorious Revolution as the Financial Revolution, as after 1688 London's financial markets developed rapidly to become the world's financial center, a position it would hold unchallenged until the First World War in 1914. The Dutch immigrants took their financial innovations, already in use for several decades in 17th century Amsterdam, with them to London, where they were adopted and improved by the English. In London, these financial techniques were applied to a much bigger market than the Amsterdam traders and bankers could ever have dreamt of. The Financial Revolution was characterized by three major developments: the foundation of the Bank of England, the introduction of long term national debt including tradable, standardized bonds, and the creation of a liquid stock market.

The Bank of England

The Bank of England, nowadays the central bank of Great Britain, was founded in 1694 to raise money for William III's government, initially for an amount of 1.2 million pounds.¹²⁰ Although its founders were inspired by the success of the Bank of Amsterdam, the Bank of England functioned quite differently. Its primary function was to finance the government deficit by issuing shares, similar to the Genoese Banco di San Giorgio in 1408. Secondly, the bank issued bank notes, although it didn't have a monopoly on this until 1844. Lending money and issuing bank notes, two important functions of modern central banks, were not the focus of the Bank of Amsterdam, which was set up as a payments bank to settle financial transactions.

Investors subscribed to the bank's initial share offering en masse. Within a few days of the end of the subscription period, the share price had risen to a 20% premium.¹²¹ Every shareholder who subscribed to more than 500 pounds' worth of stock, received one vote.¹²² The bank was highly successful, as it helped finance a war and lowered the rate at which the government could borrow. It was nationalized in 1946, when it became the modern central bank we know today.

Long-term national debt

The Nine Years' War (1689-1697) led to skyrocketing expenses for William III and short-term debt was no longer sufficient to cover his financing needs. He had to start tapping other sources for long-term debt. The financing that he carried out through life annuities, lotteries and tontines (collective annuities) came to be known as 'Dutch finance', although some historians also point out that there were similar examples in other European countries.¹²³ Between 1693 and 1698, the government raised 6.9 million pounds in long-term funds, which included funds from the Bank of England and the new East India Company, which lent 2 million pounds upon its foundation in 1698.¹²⁴

As government expenditure amounted to 72 million pounds in the same period, the money raised was far from sufficient to cover all war expenses. It was therefore not surprising that, as the war progressed, confidence in the government's credit waned and the Bank of England failed to attract fresh funding in January 1697. It was only the end of the war, nine months later, that saved the state from defaulting on its debt. Nevertheless, William III and his treasurers were in the process of developing a modern and liquid market for government bonds. The big difference between England and the Dutch Republic was that the English debt was centralized, while in the Dutch Republic cities and provinces all issued their own debt. This made the English bonds much more tradable, especially after 1751, when all outstanding debt was consolidated in standardized 'Consols' that paid 3%.¹²⁵ The bonds were traded heavily in both London and Amsterdam, reinforcing the strong connection between the two financial centers.

The growth of the London stock market

Perhaps the most significant development of the English financial revolution was the explosive growth of the London stock market. The first stock market, in Amsterdam, only had two listed companies, the Dutch East and West India Companies. London eventually grew into a much larger market. The London Stock Exchange, which had less than fifteen listed companies in



View on the Bank of England, London, Daniel Havell, after Thomas Homer Shepherd, 1816

1687, was home to around 150 companies by 1695, although just a fraction of these stocks were actively traded and many of the companies were not actually viable.¹²⁶ The 1690s IPO bubble bears a great resemblance to the 1990s internet bubble and is an interesting, often overlooked era in stock market history. Traditionally far more attention has been paid to the 1630s Dutch tulip bubble and the 1720 boom-bust episodes at the South Sea Company in London and the Mississippi Company in Paris, which are the topic of the next chapter. However, the London 1690s IPO craze is worth looking into more closely.

The London IPO craze of the 1690s

The growth of the stock market in the 1690s was triggered by several different events. England was going through a prosperous period, the influx of Dutch and Huguenot immigrants brought new capital and financial skills, and the financial fortunes generated by investors in the East Indian Company led to broader interest in stock market investing: between 1682 and 1692, the company paid out dividends equal to four times its nominal capital.¹²⁷ A more anecdotal trigger was the return of treasure hunter William Phips in 1687, who brought with him huge amounts of Spanish silver and diamonds from a shipwreck off the coast of the West Indies. Investors in Phips' journey received over 5,000 for every 100 pounds invested, sparking the enthusiasm of the investment community.¹²⁸

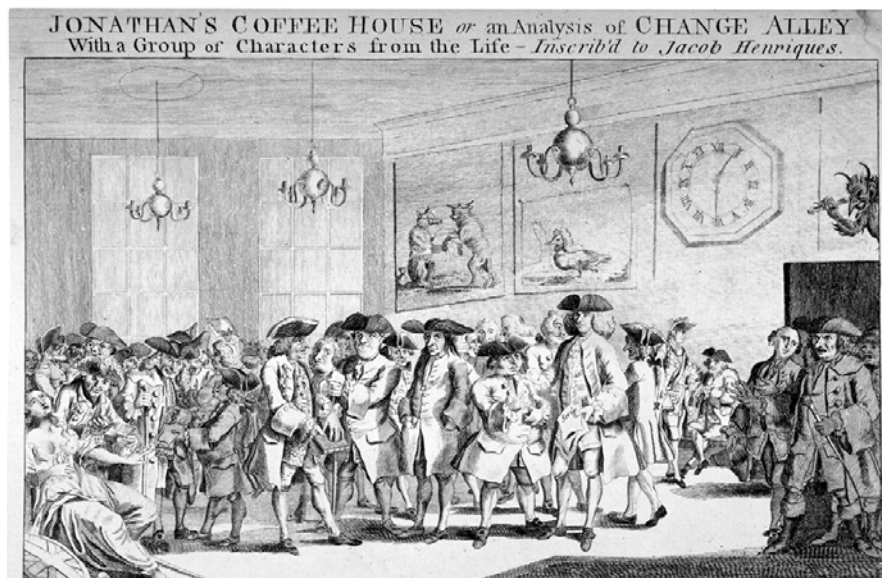
One of the new diving companies promised a 100% return, which didn't seem unrealistic as some stocks rose 500% after their initial listing.¹²⁹ Expectations skyrocketed. But when it turned out that Phips' treasure was a rarity, enthusiasm waned as fast as it had come. The stock prices of

diving companies crashed, leaving many investors ruined. Nevertheless, the IPO boom continued. Dozens of patents were issued to newly founded companies, including war-related businesses. Between 1691 and 1693 alone, 61 patents were issued.¹³⁰ Some patents were awarded for rather odd business models such as companies developing burglar alarms or lights used to catch fish.¹³¹ Stock prices of initially viable companies like the White Paper Company increased three-fold in a four-year period, while the value of the Linen Company rose from 10 pounds in 1690 to 45 pounds in 1693.¹³² However, there was a lot of skepticism. In 1693, the comical theater play 'The Volunteers, or, the Stockjobbers' ridiculed the patent boom, using the example of a mousetrap as a newly discovered way of catching mice and rats to point a finger at overly gullible investors.¹³³

Stockjobbing the market

Stock trading was dominated by stockjobbers and brokers. Jobbers were market makers speculating with their own capital, while brokers were simply middlemen, earning commissions.¹³⁴ Due to their speculative and sometimes manipulative ways, stockjobbers were generally held in low esteem and nicknamed the 'moneyed men'. They were satirized in theater plays such as one in 1701, in which stockjobber Tom Double brags about his country house, where he is served by a French cook while drinking champagne. Chancellor (2000) makes a comparison with the money culture of the 1980s, epitomized by Gordon Gekko's 'greed is good' in the movie Wall Street in 1985. Interestingly, the 1987 theater play 'Serious Money' used the 1693 play 'The Volunteers' as its preface.

The jobbers' and brokers' playground was close to the Royal Exchange, in Change Alley, near today's Bank Station between Cornhill and Lombard Street. However, coffee houses like Jonathan's were the real center of stock trading, as many traders were expelled from the Exchange for being



'Jonathan's Coffee House' or 'An analysis of Change Alley, with a group of characters from the life'. London 1763. Artist: H.O Neal. Foreigners discuss business in Jonathan's Coffee House; Britannia swoons on the left and a devil views the scene with glee on the right.

too rude and rowdy. Jonathan's Coffee House opened in 1680 in Change Alley and became the place where stock and gold prices and exchange rates, were quoted in a systematic way for the first time. For example, it was here where stockbroker John Castaing started publishing his 'The Course of Exchange and Other Things' in 1697, which appeared twice a week and existed for almost a century.¹³⁵ Jobbers and brokers assembled at the coffee houses to gather information and to trade stocks.

"A trade founded in fraud"

One of the largest critics of stockjobbers was investor and writer Daniel Defoe, best known for his master work Robinson Crusoe. Defoe was declared bankrupt in 1694 as a result of huge investment losses, after which he started to focus on writing. Burned by his painful experiences on the stock market, he published several pamphlets and stories in which he criticized the dubious methods of stockjobbers.¹³⁶ In his publications 'The villainy of stockjobbers detected' and 'The anatomy of Exchange-Alley: or, a system of stockjobbing' he accused the jobbers of all kinds of fraud, summarized in one of his quotes "tis a Trade founded in Fraud, born of Deceit, and nourished by Trick, Cheat, Wheedle, Forgeries, Falshoods, and all sorts of Delusions'.¹³⁷ Defoe was harsh in his criticism, stating that jobbers ruined banks and public credit with their tricks.

At the same time, the jobbers and brokers were much needed to provide liquidity to investors, and not every financial historian is convinced of their wrongdoings.¹³⁸ Nevertheless, stockjobbers could only survive if they made good profits on their trades, so they had an incentive to exploit overexcited and inexperienced investors. They regularly exaggerated the business prospects of new companies, leading to inflated stock prices, which they used to sell their positions. After the 1696 crash, these 'pump and dump' techniques attracted the regulator's attention in the same ways as the misconduct of bankers and investment analysts did after the internet bubble burst in 2000.

The stock market crash of 1696

The market crash of 1696 was similar to the internet bubble in 2000. Many companies simply disappeared. The stock price of the White Paper Company dropped 70%, the Linen Company as much as 90%. A staggering 70% of the 140 English and Scottish companies that existed in 1693 went under in the 1696 crash.¹³⁹ As usually occurs after modern market crashes, tighter regulations were imposed after the 1696 crash. Attempts to dampen speculation failed in 1694 and 1696, but in 1697, after investors had suffered large losses, the English government finally took action. The number of jobbers and brokers was limited to 100, with a maximum of 12 Jewish and 12 foreign brokers.¹⁴⁰ Proprietary trading was forbidden, brokers had to pay an annual fee and high commissions were abolished. This first real broad-based stock market crash signaled the end of the high life for stockjobbers. Regulation came too late, was watered down in the late 1710s, and was too weak to prevent the next boom-and-bust phase in 1720. That year is the topic of the next chapter, which describes the dramatic events that simultaneously took place in Paris, London and the Dutch Republic in the summer of 1720. A year in which millionaires were born, and subsequently ruined.



Hier in Stroppe

Lanlaar

Dat Smeer ik
U by mijn
Fronis.

Madam
kan gij
U Actie
houw

ik kne
na
Gak

U
Koop
maar
Acties

ik bid
om
U
thkom
te

Bombard

Weg
U
tekru

Die men hier
Linae necht
Vrelegen
Vregeen

RUE
QUIN QUEMPOIX
en l'Année 1720

CHAPTER 7

THE REMARKABLE STOCK MARKET BUBBLES OF 1720

This chapter describes three episodes of financial speculation that all took place in 1720, one of the most remarkable years in financial history. Three main European financial centers were hit by a wave of financial experiments, speculation, overconfidence, scrupulous insider trading and unsuspecting investors. All three episodes ended in financial disaster, offering valuable lessons to investors.

Wind trading in the Rue Quinquempoix, 1720, anonymous, after Antoine Humblot, 1720. Satirical print about wind trading on the Rue Quinquempoix in Paris where this type of trading primarily took place. Riots on the streets between traders and ruined buyers. Print 16 in the series 'Het Grote Tafereel der Dwaasheid' with its satirical prints on Wind trading and Stockbroking in 1720.

In Paris, John Law introduced a new monetary system based on printing paper money and issuing shares to pump up the price of stocks, which created and then destroyed millionaires as a result of the highly volatile fortunes of the Mississippi Company. Following on from Law's idea in Paris, in London, the South Sea Company was introduced to magically transform the high government debt burden into the shares of a seemingly prosperous company. Unfortunately, the South Sea scheme was built on false expectations and came to a bitter end, leaving investors, including Sir Isaac Newton, with nothing.

The Dutch Republic witnessed an IPO boom that brought numerous business models to the market; some were viable, but most were not. One company from this period has survived until today, but most were gone before the year had ended. The Dutch called this the period of *windhandel*, the wind trade. This age of speculation drew considerable attention from satirical poets, playwrights and cartoonists. The brilliant and detailed pamphlets in the *Het Grootte Tafereel der Dwaasheid* (The Great Mirror of Folly) display tens of pages of greedy and overconfident investors, who were drawn into suspicious money-making schemes. The book has a high entertainment value, but also repeatedly emphasizes the dangers of stock market manipulation, making it timeless and a worthwhile read also for today's investors.

John Law and the Mississippi Bubble

John Law was nothing short of a remarkable man, who lived the high life in London in his turbulent twenties. He was a tall, charming Scotsman who had one major passion in life: gambling.¹⁴¹ In every city he lived in – Amsterdam, Venice and London – Law became a well-known gambler, who made and lost fortunes. Disaster struck him at the age of 23, when he got into a duel over a woman and accidentally killed his opponent. He was thrown into prison and awaiting the death penalty when he managed to escape and flee to Amsterdam. There, Law was intrigued by how well the city's financial system worked, with the combination of the Dutch East India Company (VOC) stock trading on the exchange and the nearby Bank of Amsterdam as the city and Europe's stable monetary haven. Law marveled at how both institutions functioned but also saw their shortcomings. If the Bank of Amsterdam was so stable, why didn't it issue paper money to monetize on its good reputation and boost the Dutch Republic's economy? And why didn't the VOC issue more shares? Investors clearly liked them and more capital potentially led to higher profits.

These two ideas, a central bank issuing paper money and a government-sponsored company issuing shares became the centerpieces of Law's 'System'.¹⁴² In 1703, he published his ideas in a publication called 'Money and Trade Considered with a Proposal for Supplying the Nation with Money', and tried to convince the Scottish rulers to replace hard currency with paper money. Disappointed when his home country rejected his plan, he eventually moved to France, a country left in a financially dire position after the death of Louis XIV, who had reigned the country for 72 years. Wars during that period had proven to be very costly, resulting in a desperate need for an overhaul of the government debt burden. Eventually, Law convinced the French Regent, the Duke of Orleans, that his System would solve all their problems, and in May 1716, he finally got permission from him to set up a private bank, called the Banque Generale.

This bank was nationalized in December 1718 to become the Banque Royale, France's first central bank. Unlike the Bank of Amsterdam, the bank issued notes, and lots of them, in order to reflate France's struggling economy.

The second step in Law's System was the foundation of a government-sponsored trading company like the Dutch and English East India Companies. For this purpose, the Compagnie d'Occident was founded in 1717, better known as the Mississippi Company. The company would exploit France's vast possessions in the US state of Louisiana, roughly a quarter of today's United States. Law was determined to make the colony productive, and even hired thousands of poor German immigrants who acted as colonists in order to attract new inhabitants to the area around the city that had been founded in the Regent's honor, New Orleans. More importantly, the company would be used to convert the huge pile of government debt into tradable government equity, fairly similar to the Bank of England in 1694 and the Genoese Banco di San Giorgio in 1408.

The share price of the Mississippi Company was boosted by the issuance of paper bank money. The increasing money supply partly found its way to the stock market, and the low margin requirements for investors buying the shares led to a money-fueled asset price bubble.

Shareholders could subscribe to new share issues by borrowing from Law's bank, using their existing shares as collateral. Law helped the stock price rise further by promoting the company's prospects in Louisiana.

The share price spiraled out of control, stimulated by the vicious circle of newly issued shares being bought up with the newly printed bank notes. It rose from an initial 500 livres at the time of the company's IPO in 1717 to a spectacular 10,000 livres in January 1720. The booming stock market attracted investors from all over the country. The Rue de Quincampoix in Paris became the center of the speculative frenzy, where many investors became *millionaires* (the French word originated as a result of the many people that were made wealthy at this time), buying stocks with paper money.

But Law had got carried away. He had simply printed too much money. At the tipping point, people lost faith and wanted to convert their bank notes back into good old gold coins, causing serious problems for Law's bank. He issued various edicts in a bid to restore faith in his bank notes, one even forbidding the possession of gold.

At the same time, the Mississippi Company's prospects were turning out to be much less rosy than envisioned. The Louisiana territory was basically an unproductive swamp, full of tropical diseases and 80% of the immigrants didn't even survive the first year.¹⁴³ When word of this came out, the company's stock price crashed, despite Law's intense efforts to support it. And so, in



Portrait of John Law, ca. 1720, anonymous, 1720 - 1721.

the course of 1720, Law's System, now known as the Mississippi Bubble, burst. Both his ideas of paper money and a government-sponsored company came to an abrupt end. Law had to flee the country and was never to return to France. He lived in various European cities, ending up in Venice, where he spent his last years at the gambling tables. He died a broken man in 1729.

John Law's System has been the topic of many books and research papers. Undoubtedly, the System was one of the biggest experiments in financial history. However, historians are divided as to whether Law's ideas made sense. Paper money that was not backed with gold and silver was certainly revolutionary at the time, but became the worldwide standard in the 20th century, when central banks abandoned the gold standard and no longer pegged their currencies to gold. This 'fiat money' (as it has no intrinsic value) forms the basis of our modern monetary system and functions perfectly well as long as society has faith in the central bank that issues it. Law envisioned such a system right back in the early 18th century, making him a financial pioneer, but he had one major problem: as a gambling man – he had difficulty knowing when to stop.

The South Sea Bubble

In the meantime, the British had their own problems. Costly wars had caused government debt to balloon, with companies such as the Bank of England and the East India Company financing part of it. In 1711, a third company joined them: the South Sea Company.¹⁴⁴ It took over almost 10 million pounds of government debt, which was magically converted into company shares. In return, the South Sea Company received an annual interest payment and a monopoly on all of the country's trade in South America. The value of that monopoly, however, should be put in perspective: Spain controlled large parts of South America and was at war with Britain. As a result, during this period, trade was never really profitable.

As Law had been inspired by the Bank of England's debt to equity conversion in 1694, the directors of the South Sea Company were in turn inspired by the scale on which Law operated. In 1719, in the wake of the initial success of his System, the South Sea directors proposed converting an additional, large amount of annuities into company shares. Eventually, the company was authorized to issue 31.5 million pounds worth of shares, financed by government annuity holders converting their annuities into South Sea shares. The company had to offer them an attractive conversion ratio to encourage them to do this.

And here begins the curious part, the technicality that eventually led to an unprecedented bubble on the London stock market. The conversion ratio and hence the market value of the shares the annuitants were set to receive, was not fixed, but the total nominal value of 31.5 million pounds was. Any surplus that occurred as a result of an issued share price above the nominal value of 100 was considered company profit and benefited the existing shareholders and the government, which received an annual 7.5 million dividend from the conversion. For example, if the market value of the shares was 150 instead of the nominal value of 100, fewer shares were needed to convert the annuities, and the surplus shares were issued to the public and the income generated counted as company profit.*

** Under modern accounting rules, this surplus is counted as capital, not as profit.*



Everybody seemed to profit from higher share prices: annuitants got a higher market value for their new shares, the government got its annual payment, and the company's profits rose, benefitting existing shareholders. So it was not surprising that the stock price rose right after the scheme was announced in January 1720. The South Sea rollercoaster had begun. In February its stock price was 187, a sharp increase from 128 a month earlier.¹⁴⁵ Soon it skyrocketed to 'bubble' levels. Company director John Blunt played a leading role in creating this bubble. The conversions were set to take place in different phases. But Blunt didn't wait to see how much surplus there was at conversion, he issued the surplus shares prior to the conversion via four so-called money subscriptions, starting on 14 April when 2 million pounds' worth of shares were offered at a price of 300.¹⁴⁶ This high price didn't scare off investors: the subscription sold out within the hour.

A week later, Blunt admitted that the company's profit largely depended on a rising stock price. In order to boost this, investors were encouraged to deposit 20% margin with the remainder payable in the following sixteen months. Moreover, investors could borrow money with company shares acting as collateral. Blunt's actions not only boosted the stock price, they also helped many of his friends and members of parliament become very rich. They could subscribe at favorable terms, ahead of conversion, and then make a quick and easy profit. This was insider trading and Blunt himself profited most of all. However, he too was aware that the stock price was irrationally high in the summer of 1720 and by the time the last subscription took place in August, he had already secretly sold a lot of his stock and moved his money into property.¹⁴⁷

Change Alley, London, 1853. by John Carter. Street scene depicting events surrounding the South Sea Bubble (1711-1720). The scene is taking place in front of Garway's Coffee House, with a pawn shop at left.

A couple of months prior to this, South Sea stock had clearly entered bubble territory. On 15 June, the third money subscription was launched at a price of 1000, even though the market price then stood at 750. Nevertheless, it was fully subscribed within a few hours, as investors only had to deposit 10% margin this time. The fourth and last money subscription opened in the morning of the 22 August again at a price of 1000, and this too was sold out by mid-day.¹⁴⁸ Investors from all levels of society profited from the stock price boom. The value of real estate rose, as did the consumption of luxury goods. Every investor felt rich and many celebrated their success on the streets or in the coffee houses near the exchange. As the weeks passed, the streets were 'choked, day and night, with a roaring mob, drinking, gambling and gaping'.¹⁴⁹

However, in June and July, the first professional investors, including foreign investors, were already starting to take profits and move their money to other booming markets like those in the Dutch Republic and Hamburg, where new bubble companies appeared on the stock market. Also in London, the South Sea Company had to compete with newly listed bubble companies, most of which had business models that were not viable; only 4 of the 190 new companies lasted until the end of the year.¹⁵⁰ Nevertheless, Blunt and the company's other directors realized that competition for investors' capital had to be curbed, leading to the Bubble Act on 9 June, which basically prohibited the listing of companies without a royal charter. Unfortunately for them, the Bubble Act had the opposite effect: sharp declines in many bubble company's stock prices eventually also led to negative sentiment on South Sea stock. Soon after the last subscription, the bubble burst. At the end of August 1720, the stock was valued at 775, two weeks later at 520, and at 290 at the beginning of October. The crash had clearly begun and then rapidly gained momentum: mid-October, the stocks were at 170, a whopping 75% decline in just a few weeks.¹⁵¹

After the crash, bankrupt investors' anger was directed towards the directors of the company and politicians, who had clearly unlawfully profited from the bubble, but also cashed in in time. Eventually, a bill was passed to confiscate company directors' profits, raising 2 million pounds. Some politicians, however, had seen the flaws in the South Sea scheme long before the bubble burst. The most prominent of them was politician Archibald Hutcheson, who had repeatedly warned of financial disaster. In mid-July, after the Mississippi Bubble burst in Paris, he pointed out the many similarities between Law's System and the South Sea scheme, and just how disastrous the outcome could be.

With hindsight, one might wonder what the right level for the South Sea share price really was. The company's monopoly on trade in South America was pretty much worthless, but it received an annual income from the government. In the spring of 1720, Hutcheson determined the fair value to be 150 pounds.¹⁵² As the stock price hovered around the 1,000 pound level in the summer, he rightfully voiced his fears about overvaluation, but his warnings were clearly not heard by the herd of investors. As in France and in many further stock market episodes that followed, a combination of investor exuberance, overoptimism, insider trading and leverage had ended in disaster.

The Dutch bubble companies and ‘wind’ traders

The speculation fever in Paris and London spread towards the Dutch Republic. While the involvement of Dutch investors in the French Mississippi Company was limited, the English South Sea Company was a popular investment object on the Amsterdam stock exchange, as were many English listed companies and government bonds. While the French and English governments transferred government debt into tradable company shares, there was far less need to do this in the Dutch Republic. Its government finances were healthier and the wealthy upper class had enough capital to finance any Dutch deficits. Nevertheless, broker Gabriel de Souza Britto made several proposals to set up similar debt conversion schemes, including one to help restructure the struggling West India Company.¹⁵³

Britto was thinking big, proposing to found national companies with a capital of 100 million guilders.¹⁵⁴ None of his ideas ever came to fruition, probably because of the enormous scale of his proposed plans and because powerful business men wanted to protect their own interests. Nevertheless, inspired by the initial rise of the South Sea’s stock price and the introduction of many other new English joint-stock companies, English and Dutch businessmen developed several ideas for new Dutch companies with various business models. Most plans focused on insurance, trading, commerce and industry. For example, in June 1720, two Englishmen presented their plans for a new insurance company to the city of Amsterdam.¹⁵⁵ The city’s magistrates rejected their plans, most likely to protect their own businesses, and forbade the formation of new joint-stock companies in the city. The cities of Haarlem and Leiden followed their example.

Interestingly, only two weeks later, Amsterdam’s biggest rival, Rotterdam, decided to allow a new insurance company, *Maatschappij van Assurantie, Discontering en Beleening der Stad Rotterdam*, to be established. The company still exists today as ASR, and is the only company that survived the Dutch 1720 IPO craze. Historians have often debated how many other companies really had a chance of survival. In addition to ASR, three other companies, in Utrecht and Middelburg, lasted for several decades, but most others ceased to exist before the end of the year.

Despite Amsterdam’s ban on new listings, the city’s Dam Square and its coffee houses in the adjacent Kalverstraat became the epicenter of speculation. As speculators traded the expected premium on the newly listed stock prices, rather than the stocks themselves, they were regarded as ‘wind traders’ and were ridiculed in countless plays and satirical cartoons. As most of the companies had unrealistic business models, they too were nicknamed bubble companies, just waiting to burst. There is little known about how the stocks of the bubble companies traded and when exactly they disappeared, as there is little Dutch stock market data available with regards to the year 1720.

While Amsterdam, Haarlem and Leiden forbade the formation of bubble companies, other cities were eager to develop highly ambitious business plans, involving large amounts of capital.

Between June and October 1720, a total of 40 projects were drawn up with a combined total value of 800 million guilders.¹⁵⁶ Historians Gelderblom and Jonker point out that this amounts to three times the Dutch Republic's estimated GDP at the time, and to no less than 40 times the debt and equity of the Dutch West and East India Companies combined. Of these projects, 32 were approved and were able to collect investor subscriptions. This is a remarkably high number, since the last Dutch IPO had been in 1621 when the West India Company was listed.

Clearly, the events in Paris and London had caught the imagination of Dutch investors, as they subscribed on a massive scale. One example was Utrecht's 10-million-guilder plan, which was never finalized, to connect the city to the sea (today's IJsselmeer) and which was oversubscribed 18 times.¹⁵⁷ As only a small initial margin deposit was required, it made it easy for small investors to participate. It was these unexperienced small investors, lured into the wind trading at the height of the speculative frenzy in September and October, who were hit hardest when the bubble burst. As the English South Sea stock price plummeted in early September, Dutch stock prices nose-dived as investors stampeded to get out. The stock prices of the Dutch West and East India companies were also affected.

The VOC stock price, which had risen from 700 to a high of 1260 in August, fell back to 850 in the following months, leaving many small investors with huge losses.¹⁵⁸ In the end, only eight projects developed any meaningful business activities, showing how many were merely 'wind' companies, disappearing as soon the English and Dutch stock market bubbles ran out of steam. On 5 October, angry investors beleaguered one of the coffee houses, the French coffee house on the Kalverstraat, which was seen as the center of speculation and was nicknamed Quincampoix, after the Paris street that took center stage in the Mississippi share bubble. Just a week later, Amsterdam introduced a new law to stop speculation, which was effectively the end of the Dutch wind trade and bubble companies.¹⁵⁹

The Dutch Republic was less affected by the series of events in 1720 than France and England were.¹⁶⁰ Most projects were set up by local provinces, as the national government and the city of Amsterdam never approved any of them. This restricted the losses to a relatively small amount of people. Moreover, there was no national speculation fever as there had been in France and England, and the bubble period was much shorter, roughly between June and September. What remained however were, once again, very valuable lessons for greedy investors, and above all the publication of the most colorful book on investing ever created: *Het Grootte Tafereel der Dwaasheid* or 'The Great Mirror of Folly'.

The most colorful investment book ever published

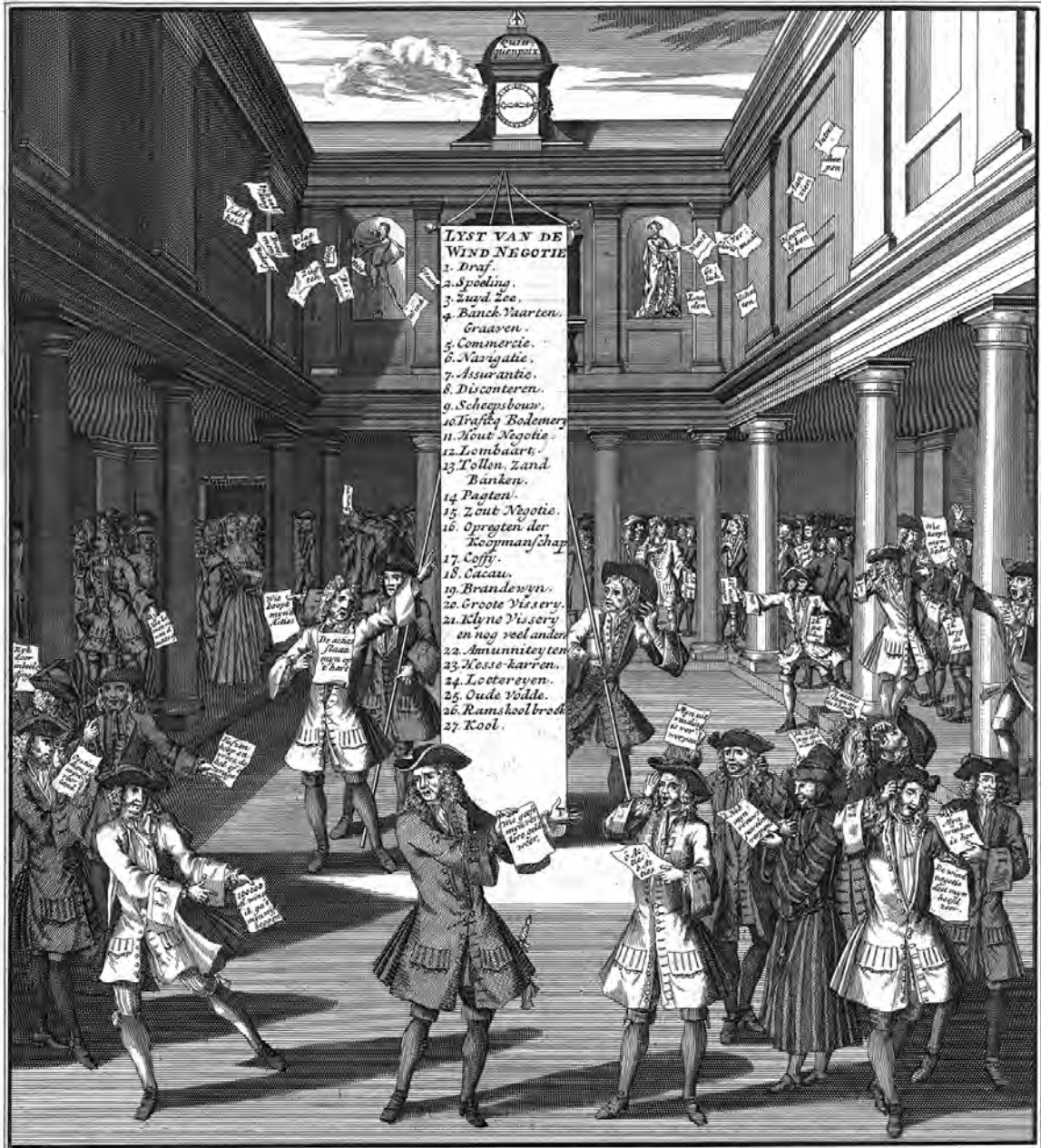
The events of 1720 inspired authors and book sellers to publish one of the most entertaining books on investments ever written, and certainly the most colorful, given that the bulk of the book consists of satirical, detailed prints about stocks and speculation.¹⁶¹ Its front cover nicely summarizes the contents and purpose of the book. Published in Amsterdam in 1720, it was printed as a warning for the offspring of the 'foolish and wise' bubble investors in that fatal year. The translation of the official subheading reads: 'showing the rise, progress and fall of bubbles



and wind trading in France, England and the Netherlands in the year 1720'. So despite the book's Dutch origins and language, ample attention is also paid to the series of events surrounding the Mississippi and South Sea companies.

Quincampoix Destroyed, 1720, anonymous. Print 14 in the series 'Tafereel der Dwaasheid' with satirical prints about Wind Trading or Stockbroking of 1720.

The lion's share of the book is made up of 69, very detailed, satirical prints, in which shrewd stock brokers and greedy, ignorant investors are mocked in various lively scenes. Their creators clearly did a great job in illustrating the 1720 bubble year, as they emphasized the greed, fear, overconfidence and ignorance of all involved in the wind trade. The print above is the best-known print of the book and shows the fall of the bubble company investors. The person in the bottom right corner was an investor in the South Sea Company ('Zuyt'), who is literally 'losing his pants'. On the stage, we see traders throwing share certificates into the public, with values ranging from zero to 2,000. The accompanying text explains how John Law misled a whole nation of investors. The flag on the stage reads *Het Spul is Uyt*, Dutch for 'game over'.

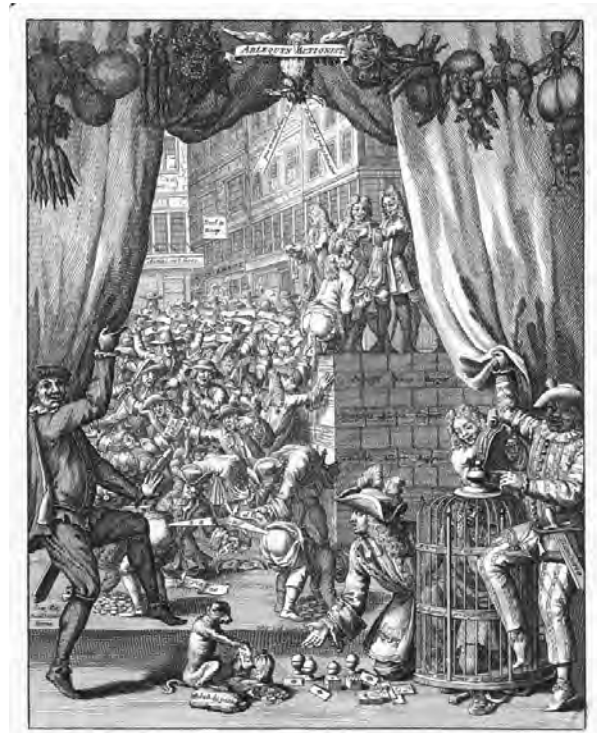


Desperate traders in the Amsterdam stock exchange, 1720, anonymous. Print 5 in the series 'Tafereel der Dwaasheid' with satirical prints of Wind Trading or Stockbroking of 1720.

The picture on the left shows desperate speculators apparently holding share certificates, but if one takes a closer look, it becomes clear that the pieces of paper just contain complaints about their heavy losses, as their shares had become worthless. One speculator states he lost his wife's jewelry, another complains about his headache. The title of this print explains how wind traders have lost their money and goods, and how they have 'injured' their wives and children with their speculating.

A number of satirical theater plays, were produced at around the same time, which the Italians would have described as *commedia dell' arte*. The main playwright was Pieter Langedijk, who wrote two plays related to the wind trade of 1720. One was called *Quincampoix of de Windhandelaars* (Quincampoix or the wind traders) in which Amsterdam's French coffee house plays a central role. The play describes how speculators trade in premiums and options on the bubble stocks, causing discomfort in the family of one of the speculators. Langedijk's second play, *Arlequin Actionist* (Harlequin Share Trader), is full of swindling and deception. The play's title page shows a man swallowing coins which then are emitted from his body as shares.

Both plays turned out to be very popular and are said to be one of the reasons for an attack on the French coffee house on 5 October, as both were performed before that date. 1720 turned out to be one of the most eventful and painful years in stock market history. Fortunately, we still have the *Groote Tafereel der Dwaasheid*. Although is not a very well-known book for the average private or professional investor, it reminds us of the lessons we can learn from a period with some of the largest stock market bubbles in history.



Harlekijn Actionist (harlequin share trader), 1720, anonymous, Print 12 in the series 'Tafereel der Dwaasheid' with satirical prints about the Wind Trade or Stockbroking of 1720. The harlequin Bombario and a buffoon raise a curtain which reveals a huge crowd of traders at the Quincampoix coffee house, all falling over each other to get hold of the shares which are being emitted by someone standing on a podium. In the foreground Hermes (the god of trade) is imprisoned in a cage.



CHAPTER 8

HAUTE FINANCE IN AMSTERDAM AND LONDON

A new breed of bankers started to dominate the two largest European financial centers, in the 18th century in Amsterdam and the 19th century in London. As time progressed, London slowly but surely took over as Europe's financial capital, even though Amsterdam remained an important market for European kings and governments to raise money, until around 1780. At the same time, bond and equity markets in London started to develop quickly with centralized, liquid English government bonds and joint-stock companies that issued share capital on the London capital market, as described in Chapter 6.

St. Paul's Cathedral, ca. 1754,
London, Canaletto, 1697–1768,
Venetian, active in Britain
(1746–55).

This chapter takes a look at the bankers who became tremendously rich, just as the 15th century Medici bankers before them. However, some of the players in this world of high finance flew too high, eventually crashing and causing major banking crises in 1763, 1772 and 1825. Many banking houses simply disappeared as there was no lender of last resort to rescue them. Academics have also pointed out a number of similarities between the 1763 banking crisis and both the 1998 collapse of hedge fund Long-Term Capital Management and the 2008 Lehman fallout.¹⁶² We will take a look at the fortunes of the main bankers of 18th century Amsterdam, Hope & Co., and of 19th century London, the Rothschilds. Both banks survived several crises, three of which will be discussed in this chapter; the European banking crisis of 1763, the financial crisis of 1772, and the world's first emerging markets crisis of the 1820s.

Haute finance in Amsterdam: Hope & Co

One banking dynasty that survived the crises of 1763 and 1772 and symbolized the power of the high finance bankers of the 18th century, was the Hope family. Their legacy can still be admired today in the Dutch cities of Amsterdam and Haarlem, where they built large canal and country houses, to conduct their business and enjoy their leisure time. In 1720 the Scottish merchant banker Archibald Hope moved to Amsterdam and after his death in 1734, his brothers Adrian and Thomas continued the business.¹⁶³ Fifteen years later, the brothers had built up such a good reputation that stadtholder William IV asked Thomas Hope to be his advisor, and he is believed to be the author of a proposal to get the Dutch economy out of the slump it experienced in the midst of the 18th century.¹⁶⁴ At the request of William IV, Thomas also served as a director of the Dutch East and West India Companies, aiming to help the struggling trading companies.

After the failure of several of its competitors in the 1763 and 1772 crises, Hope & Co emerged as Amsterdam and Europe's leading banking house of the late 18th century. It dwarfed every competitor, with a capital that was many times greater than that of its peers. Although the Dutch golden age was over, Amsterdam's wealthy investors, low interest rates and well-developed financial ecosystem still made it an attractive place for European governments and kings to finance their debt. The Hope bankers were at the forefront of this issuance, mainly to the Russian emperor and the English parliament. Because of the Seven Years War (1756-1763), English government debt nearly doubled to 132 million pounds, and Hope was one of their main financiers. Moreover, the Russian emperor borrowed a total sum of 53 million guilders from Hope, an enormous amount at the time.¹⁶⁵ By the 1790s, the Hope's bank balance had grown to equal that of the Bank of Amsterdam, showing the firm's dominance in the city.¹⁶⁶



Archibald Hope the Elder, 1737, Gerard Sanders. At this age his son Archibald already died.



Villa Paviljoen Welgelegen owned by banker Henri Hope and located in Harlemmerhout, near Haarlem. Jan Lucas van der Beek, after Daniël Kerkhoff, 1789.

In addition to underwriting government loans, the Hope bankers made money from trading in commodities and bills of exchange. To ensure good quality information, the bank employed several news couriers so it could profit from foreign exchange and commodity price fluctuations. The Hope bankers were true merchant bankers, combining trade with banking, as the early Italian bankers had done. The firm had its offices and warehouses on Amsterdam's Keizersgracht, at the current house numbers 444-446, where it employed around 26 people.¹⁶⁷ But in addition to the Hope's impressive canal houses, which are still intact, the most prominent residence of the family was the Welgelegen country house, which today serves as the seat of the province of North Holland in the Dutch city of Haarlem. The giant country house looks like a princely palace, displaying the enormous wealth and lavish lifestyle of Henry Hope, the company's leading banker in the 1780s, who regularly hosted classical concerts and possessed an art collection of some 400 paintings.¹⁶⁸

The Hopes were the true high financiers of late 18th century Amsterdam, but also realized that the hegemony of the Dutch Republic was waning. When the French occupied the Republic in 1793, the Hope bankers decided to move to London, illustrating how power shifted from Amsterdam to London. In 1802, the bank played an important role in the so-called Louisiana purchase, when the US bought 2.1 million square kilometers of land from France, thereby doubling its territory. The Hope bankers partnered up with the famous British Barings Bank, issuing shares to finance the 15 million dollar transaction, which was an enormous sum at the time.¹⁶⁹ Hope & Co. existed as an independent banking house until 1962, when it merged with Mees & Zn, to form an entity that was later acquired by the Dutch bank ABN, which in turn merged with the AMRO Bank to form today's ABN AMRO.

The Lehman-like crisis of 1763

Hope & Co survived the European banking crisis of 1763, which had its roots in the Seven Years' War (1756-1763), a European conflict that involved many large countries needing money to finance their war expenses. England and Prussia in particular financed their needs in Amsterdam via banking houses such as Hope & Co, Clifford, Pels and De Neufville. This last bank was a newcomer to the Amsterdam banking scene, but rose rapidly to prominence, through its risky practices and excessive lending. Despite their growing importance, the De Neufville bankers would never be part of the established banking community, as they were considered to be *nouveau riche* and, above all, reckless lenders without taste. Other bankers jokingly remarked that Leendert de Neufville, the main banker of the family, did not have a single book in his lavishly decorated canal house.¹⁷⁰

Leendert de Neufville, who started the company in 1751 when he was only 21 years old, devised a specialized technique together with his partners, which connected bills of exchange together to form a chain of credit. This chain was an easy way to provide credit to cash-starved governments, but was also risky as it was not backed with actual gold, silver or other commodities. The technique, called *wisselruiterij* in Dutch and also known as accept credit, enabled Amsterdam bankers to cooperate with Hamburg bankers to finance trade and manufacturing in financially underdeveloped emerging markets like Prussia, with Berlin as the main city in that region.¹⁷¹

The chain of bills of exchange caused banks in different cities to become dependent on each other, like the investment banks in the run-up to the 2008 crisis. Another parallel was that in both cases short-term instruments were used to finance long-term projects and expenses. This so-called maturity gap causes liquidity problems once banks cannot find other parties to finance their short-term needs. This was what happened to Bear Stearns in March 2008, for example, and eventually to Lehman Brothers half a year later. De Neufville too fell victim to these same liquidity problems 250 years earlier.¹⁷²

The De Neufville bankers not only lent money to governments, they also invested in commodities. Their largest and most prestigious deal was a one million guilder grain purchase together with the largest banker in Berlin. However, as the war came to an end, grain prices collapsed by 75% and De Neufville was left with a large hole in its balance sheet.¹⁷³ To make matters worse, De Neufville had a claim on another, smaller bank called Aron Joseph & Compagnie, which was troubled by falling commodity prices as well. This last bank closed its doors on 28 July, followed by De Neufville two days later.

What followed was a contagious financial panic that sent shockwaves through the European banking world, especially in Amsterdam and Hamburg, leading to around one hundred bankruptcies.¹⁷⁴ Berlin, dependent on banking services from both cities, fell into a deep economic depression. Hamburg's bankers were hit hard and the city's authorities wrote a letter, dated the 4th of August, to the mayors of Amsterdam asking them to save De Neufville from bankruptcy in order to avoid a financial crisis in Hamburg. As was the case with Lehman



Allegory on the bankruptcies on the Amsterdam stock exchange as a result of the speculation and wind trading, 1763, Jan caspar Philips after Gerard van Nijmegen, 1763. Amsterdam commerce (Mercury) is being out by Pride and Opulence. In the foreground there is an empty chest, a pile of unpaid bills and a monkey doing the accounts, in the background there are dark clouds hanging over the Amsterdam stock exchange.

Brothers in 2008, De Neufville had a thin capital base. More established banking houses such as Hope & Co, Clifford and Pels were financed much more conservatively, which enabled them to survive the 1763 crisis. Academics have also drawn comparisons between this and the August 1998 crisis, when highly leveraged hedge fund Long Term Capital Management was forced to liquidate assets to meet liabilities.¹⁷⁵

The combination of highly leveraged institutions, liquidity drains in times of crisis, the interdependence between banks and the interaction between market and credit risks proved to be a recipe for financial contagion every time – in 1763, 1998 and 2008. The main difference between 1763 and the two latter episodes was the absence of a lender of last resort. The bankers of Hope & Co and Clifford did attempt to set up a private rescue fund, but banking house Pels refused to cooperate, as it apparently bore a grudge against the De Neufvilles.¹⁷⁶ Eventually, Leendert de Neufville's possessions were auctioned on 19 June 1765. Among his 122 paintings was Johannes Vermeer's famous painting *The Milkmaid*, which was sold for 560 guilders.¹⁷⁷

The financial crisis of 1772

A decade later in 1772, the next financial crisis occurred. This time, it originated in England after a period of rapid economic growth and overoptimism about the prospects for English joint-stock companies such as the English East India Company. One banker, Alexander Fordyce, became the focus of attention when he escaped to France as he couldn't repay his debtors. Fordyce had shorted East India Company stocks, but as the stock price remained flat and margin calls kicked in, his trading losses amounted to 300,000 pounds.¹⁷⁸ The subsequent bank run led to the closure of dozens of banks in London. In Scotland, the main victim was the Ayr Bank, which had issued a large part of Scotland's currency and accounted for 40% of Scotland's banking assets. The bank closed its doors on Monday 22 June, to some historians referred to as 'Black Monday'.¹⁷⁹ The *London Chronicle* described it as a day of exceptional panic, with everyone expecting universal bankruptcy and the end of every banker in London; the whole city was in tears, according to the newspaper.¹⁸⁰

As in 1763, the banking crisis proved to be contagious. The large Amsterdam banking houses had large stakes in the English East India Company and were hurt by the drop in its stock price. Clifford & Sons apparently held the lion's share of the estimated 40 million guilders' worth of stock that were assumed to be in the hands of Dutch investors.¹⁸¹ At the same time, Dutch investors were hit by problematic plantation loans in Suriname, where planters were confronted with revolts and falling prices, leading to interest payment suspensions and defaults.¹⁸²

The Dutch newspaper *De Koopman* published rumors of an imminent stock market crash, warning that it was going to be 1763 all over again. Investors became paralyzed, credit dried up and the market seemed to just be waiting for the Cliffords to go bankrupt, with the English East India stock price tumbling 50 points to 170 by 29 December. *De Koopman* reported that the situation was even worse than in 1763, as trading in English securities had almost dried up.¹⁸³ On

Sunday 10 January 1773, London merchant banks shipped large amounts of gold by packet boat to their Dutch correspondents, in order to support Amsterdam's money markets. London-based Dutchman Joshua van Neck, a prominent banker in the City, is said to have sent half a million of gold to his Amsterdam counterparts.¹⁸⁴ Merchants and bankers in Amsterdam realized how serious the crisis was. A group of 85 of them urged the city's authorities to set up an emergency fund to avoid further bankruptcies. The fund, called the *Fonds tot maintien van het publiek crediet* opened on 15 January 1773, funded with 2 million guilders, probably taken from the Bank of Amsterdam.¹⁸⁵ The fund was wound up just six months later, as the funding was hardly used and the market had started functioning again, although only in a very modest way.

English East India shares reached a low of 142.75 on 7 June, after which there was no real recovery and prices stayed low in the years that followed. Cliffords went out of business, dragging down competitor Pels with them. The Hope bankers survived the crisis, which reaffirmed their market leadership. Many investors went broke, as it was quite usual to invest in stocks with a margin requirement of only around 20%, which made the investment losses that much bigger.¹⁸⁶ The 1772/3 crisis originated on the stock market, infected the credit market, and was exacerbated by the use of leverage by both bankers and investors, reckless speculation and overoptimism regarding a company's prospects. It was time for a more conservative, unleveraged investment approach, based on diversification and buying and holding securities for the longer term. We will never know for sure, but the 1772/3 crisis may have inspired Amsterdam-based stockbroker Abraham van Ketwich to set up the world's first investment fund, a year later in 1774. Van Ketwich's financial innovations will be one of the main topics in Chapter 9.

The largest banking dynasty of all times: the Rothschilds

As London took over Amsterdam's leading financial role in the late 18th and early 19th century, London-based banking houses became the main financiers of the world's economy. Of them, one banking family came to dominate all of them: the Rothschilds, often described as the most powerful and rich banking dynasty of all time.¹⁸⁷ In the words of the family's main biographer, historian Niall Ferguson, the company was the contemporary equivalent of a combination of Merrill Lynch, Morgan Stanley, JP Morgan and Goldman Sachs, and the International Monetary Fund rolled into one, given the role it played in supporting the finances of governments and central banks in the 19th century. This multinational bank reached its zenith between 1820 and 1860, and was the world's biggest bank between 1815 and 1914.

Not bad for a family that started their lives in Frankfurt's Judengasse, the packed Jewish ghetto with fifteen times more inhabitants than the neighborhood was actually meant for. There, Mayer Amschel Rothschild established himself as a successful dealer in coins and metals in the 1790s, laying the early foundations for the Rothschild empire. Subsequently, his five sons developed the business into the most powerful banking dynasty of all times. Nothing symbolizes their rise better than the increase in the bank's capital: in 1815 they were on a par with their biggest rival, Baring Brothers, but a decade later their capital was ten times that of Barings.

The Rothschilds' greatest advantage was the presence of Amschel's sons in all the largest financial centers at the time. Nathan Rothschild's London branch was the biggest, established in 1811, and was supported by the branches operated by the four other sons in Vienna (Salomon Rothschild), Frankfurt (Amschel), Naples (Carl) and Paris (James). Together, they were able to service the governments of virtually the entire European continent, providing loans to cash-starved and war-hungry kings. Lending to governments and speculation in government bonds turned out to be the biggest money maker for the family in the first decades of its hegemony. To succeed in this business, the family needed to have the best political connections and the fastest news services. No wonder the Rothschilds spent so much time maintaining good relations with the leading European political rulers of the day, and why the banking dynasty maintained an excellent news network between the different family branches, giving them an immense advantage over their competitors.

The Rothschilds became so powerful that European governments depended on them to finance their deficits, and even troubled central banks had to turn to the family for emergency financing: in the 1825 British financial crisis, the Rothschilds lent vast amounts of gold, collected from its different branches, to the Bank of England to avert a deep economic depression as that bank was not able to pay out enough cash to its creditors. The Rothschilds not only dominated the international bond market, but also the European gold and currency markets, profiting from price differences between different financial centers, once again using their family network.

The Rothschilds even influenced the outcome of the famous Battle of Waterloo in 1815, as they financed the British army in its successful encounter with Napoleon. Nathan Rothschild was appointed as the financier who had to collect gold from all over Europe, to send to the British commander, the Duke of Wellington. But as the war ended after the battle, Nathan decided to use the gold to buy British government bonds. As peace was restored, bond prices started to rise, and Nathan kept on buying. As prices rose further, his brother induced him to sell the position, but Nathan refused. Eventually, in late 1817, he sold his position after the bonds had risen by 40%, pocketing profits of around 600 million pounds in today's money, making it one of the most remarkable trades in financial history. Even their biggest banking rivals, the Barings Brothers, admired Nathan's nerve and his willingness to take such large risks in the bond markets.¹⁸⁸

A year later, in 1818, the Rothschilds constructed a 5 million pounds Prussian loan, which was distributed via its branches all over Europe, making the issue a huge success. The novelty of issuing a bond in a currency different to that of the debtor's home currency and selling it in different countries, made the Rothschilds the fathers of the modern international bond market and the loan to Prussia is seen as the first issue of a Eurobond.¹⁸⁹ The bond market made the Rothschilds immensely rich, but not popular. The banking dynasty was a constant target of mainly anti-Jewish sentiment, leading to countless satirical cartoons, displaying the Rothschilds as greedy and harsh bankers, controlling governments and through them, the world. One famous French cartoon from 1898 shows James Rothschild, characterized by a sharp nose and long fingers, embracing the globe, symbolizing how the Rothschilds had come to rule the world's economy.



The Battle of Waterloo,
Jan Willem Pieneman, 1824.

Later on, as governments had less financing needs, the Rothschilds started to finance and control the newly-built railway networks, especially in Germany and Austria in the 1830s and 1840s, and they gained control of the mining behemoth Rio Tinto in the 1880s. The empire of the Rothschilds still lives on today, through various financial services, real estate and winery companies, still carefully run by the descendants of the mighty 19th century Rothschild brothers. The Rothschilds' participation in the Latin American debt issues launched in the 1820s was minimal, which limited the losses they suffered in what came to be known as the first emerging market crisis.

The first emerging markets crisis

Imagine a stockbroker offering you an investment with an attractive yield, but from a country you never heard of. With today's freely available information, it would be virtually impossible to fall for such fraud. However, in October 1822 this was exactly what Scotsman Gregor MacGregor offered to interested London-based investors. He offered them a bond issue, enabling investors to share in the richness of the Latin American country of Poyais, which had extremely fertile ground, pure water and abundant gold reserves. That is, according to MacGregor, the self-proclaimed Prince of Poyais. MacGregor's fraudulent scheme was eventually dismantled when 200 hopeful emigrants travelled to Poyais in early 1823, only to find out that the 'country' was nothing more than a swamp-like territory inhabited by hostile Indians. Only 50 of the 200 emigrants managed

One dollar, Bank of Poyais, Republic of Poyais (1820s).



to return to England, as many died of starvation and tropical diseases. As with the Mississippi scheme, seemingly golden investment opportunities turned out to be nothing more than empty promises.

The Poyais bond is the only bond issued by a non-existent country to ever have been listed on the London Stock Exchange. This is a good illustration of what caused the first emerging markets* boom and bust, which resulted in an English financial and economic crisis, almost bankrupting the Bank of England, which was, as we have seen, rescued by the Rothschilds' capital. This bubble episode lasted from 1822 to 1825 and basically consisted of a boom in South American government bonds and mining stocks, as well as a 1720-like IPO bubble. The British economy was booming as the Industrial Revolution had led to a 34% increase in industrial production between 1820 and 1825¹⁹⁰, and London had replaced Amsterdam as the main financial center for government bond funding, fueled by Rothschilds' 1818 sterling loan to Prussia.

** The term emerging markets wasn't used at the time. The term is said to be coined by former World Bank's deputy director Antoine van Agtmael in an investor conference in Thailand in 1981, as a friendlier sounding alternative to 'Third World countries' or 'less developed countries'.*

The initial success of the Poyais loan triggered a boom in new South American bond issues, starting with a 2 million pound Colombian bond and a Chilean loan in the spring of 1822. Both bonds were initially a huge success, leading to large profits for the first investors, as only part of the bond's face value had to be paid upfront. The bond's prospectuses idealized the size of the countries' gold reserves, which, according to bullish brokers and investors, would be extracted with the help of superior British engineering expertise. A total of 21 million pounds (or 2.8 billion US dollars today) worth of bonds were issued between 1822 and 1825, two-thirds coming from Colombia and Mexico.¹⁹¹ Investors were attracted by the bonds' high yields, reflecting their higher risks, as is the case with typical emerging market bonds today. They were searching for alternatives to the low yields on English government bonds ('Consols') which were only around 3% at the time, as English debt had become much safer. In comparison, MacGregor promised a 6% yield on the Poyais loan, and the Colombian bond yielded 7%, so roughly double the return on the Consols.

The initial success of the bond issues and the country's commodity potential sparked a bull market in South American mining stocks as well. The stocks of companies such as Anglo-Mexican and Real del Monte rose spectacularly in price as, just as in the case of the bonds, optimistic company prospectuses promising abundant and easy to extract gold reserves lured investors into buying them. Anglo-Mexican rose from 33 in December 1824 to 158 a month later, while Real del Monte advanced from 550 to 1350¹⁹². As in the 1720s, 1920s and 1990s, investors became obsessed by the dawn of a 'new era', leading to seemingly unlimited opportunities.

Such hopes were also apparent in the third phase of the 1820s bull market, which was a 1720-like domestic IPO craze. Various schemes were set up with different business models: the London Umbrella Company wanted to set up a network of umbrella pick-up points, the Metropolitan Fish Company was supposed to supply fish to poor people and the London Pawnbroking Company wanted to compete with the existing usurious pawnbrokers. In January 1825 alone, nearly 70 companies were floated on the stock market. To make it easier to invest, only a small sum had to be paid upfront. To spark interest, journalists were paid to promote the companies and brokers manipulated stock prices. Moreover, to make the schemes credible, several members of parliament, including the prime minister Lord Liverpool¹⁹³, were installed as directors of the new companies, despite the fact that several journalists pointed out that these politicians were stimulating speculation rather than fighting it. In short, it was 1720 all over again.

However, the bull market came to an abrupt end in the second half of the 1820s. When the dust settled at the end of the decade, Colombian, Peruvian and Mexican government bonds had fallen by around 80%.¹⁹⁴ Stock prices began to drop in the summer of 1825, with the Real Del Monte share price dropping from 1,550 to under 200.¹⁹⁵ On average, stock prices fell around 80% when the bubble burst.¹⁹⁶ The financial market crisis eventually grew into a banking crisis. The Bank of England's gold reserves declined rapidly, preventing the institution from acting as the lender of last resort for the numerous banks that failed in the bubble's aftermath. As described earlier, it even needed help from the powerful Rothschild bankers.

As a result of the financial crisis, the booming British economy of the first half of the 1820s fell into a deep economic depression in 1826, only to recover by the end of the decade. The 1820s crisis was one of many panics in the 19th century. The most severe one was in 1873, leading to the Great Depression, a term that was used until it was overshadowed by the events of the 1930s. In the run-up to the 1929-1933 Wall Street crash, the first modern open-end mutual funds were founded in Boston. This kickstarted the growth of the modern investment fund industry, which developed into the multi-trillion-dollar industry we know today. But already in the 18th and 19th century, the predecessors of the mutual funds were founded, in the Netherlands and in Great Britain. Chapter 9 takes a closer look at these financial innovations.



CHAPTER 9

THE BIRTH OF THE MUTUAL FUND (1774)

The investment fund industry started developing into the professional industry it is today in the 1920s, as described in the opening chapter. However, the first mutual fund was already founded in late 18th century Amsterdam. There, the first fund managers wanted to offer their investors diversification, income and low turnover. Unfortunately, although this was a brilliant innovation, the timing was disastrous. Investment returns and fund flows were so disappointing, that it took 150 years for the modern mutual fund to be reinvented, and another 40 years before the industry slowly but surely turned into the mammoth industry it is today.

[View of the Golden Bend in the Herengracht, Gerrit Adriaensz. Berckheyde, 1671-1672.](#)

Abraham van Ketwich: the world's first mutual fund manager

In 1774, the Amsterdam-based merchant Abraham van Ketwich came up with the ingenious idea of setting up an investment fund, called *Eendragt Maakt Magt* (unity creates strength), which enabled small investors to participate in a diversified portfolio of bonds. The fund was called a *negotiatie*, the Dutch word for loan at the time. The history of *Eendragt Maakt Magt* is covered extensively in the 1967 thesis of the Dutch economist W.H. Berghuis entitled *Ontstaan en ontwikkeling van de Nederlandse beleggingsfondsen tot 1914*.^{*} The fund was launched a year after the financial crisis of 1772-1773. As described in Chapter 8, the crisis was caused by the decline in the stock price of the English East India Company, followed by a banking crisis in both London and Amsterdam.

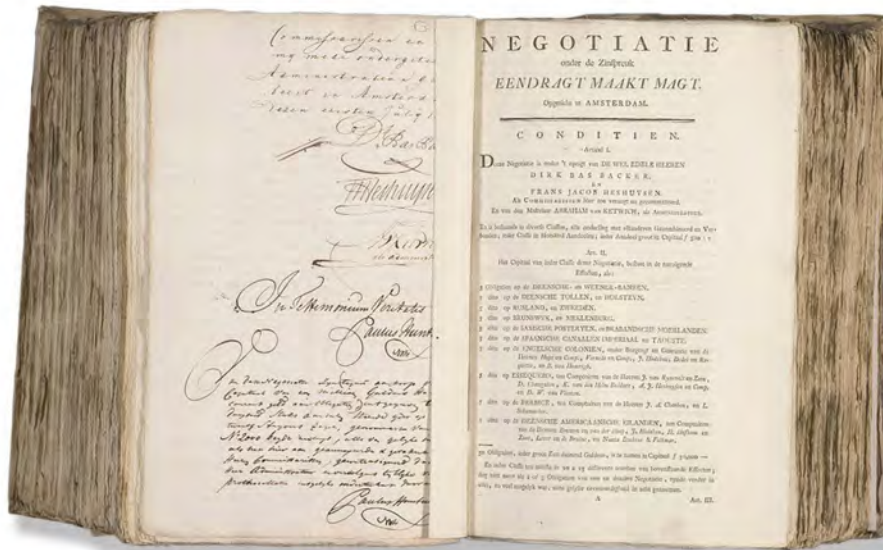
** This translates to: Origin and development of the Dutch investment funds until 1914. Unless stated otherwise, this paragraph draws from this publication.*

Hurt by the crisis, investors were primarily focused on the risks associated with investing in bonds and equities. Spreading your money across a variety of securities was a logical way of reducing these risks and this is exactly what Van Ketwich had in mind. The Utrecht fund '*Contract 1773*' possibly served as a role model for Van Ketwich's revolutionary mutual fund idea. This fund was established in December 1773, about six months before *Eendragt Maakt Magt*'s introduction. The *Contract 1773* had four hundred shares, or *porties*, of 300 guilders each, making a total of 120,000 guilders, which was invested in three bonds with an expected distribution of 4% per year. Wasn't this the world's first investment fund? Berghuis' opinion was it isn't, because it had a lottery-like element built into its structure; in fact, the first six articles of the product's documentation were completely devoted to it. Moreover, diversification benefits were very limited, as the fund only invested in three bonds.

Eendragt maakt Magt

Van Ketwich launched *Eendragt Maakt Magt* in July 1774 at his offices on the Amsterdam Herengracht canal. There, investors could subscribe to the fund, which consisted of 2,000 shares. This number was fixed, making *Eendragt Maakt Magt* a closed-end fund, in contrast to the modern mutual funds that have an open-end structure. The detailed prospectus of *Eendragt Maakt Magt* precisely described the investment policy of the fund; even the initial investments were mentioned. The fund invested in fifty different bonds in order for its investors to be able to achieve a diversified portfolio with only a small investment; the most important and attractive aspect of an investment fund. An investor could invest in the fund with as little as 500 guilders.

The fifty bonds were divided into ten different categories. Plantation loans, the predecessors of the modern asset-backed security, made up the main part of the fund. In addition, Van Ketwich intended to invest in bonds that were linked to Spanish and Danish tolls, and Russian, Swedish and Danish government bonds. Dutch government bonds were excluded, probably because they were considered so safe that diversification was unnecessary. As a result of their low level of perceived risk, Dutch government bonds also had a low yield, while Van Ketwich was aiming for an annual payout yield of 4%, according to the prospectus. The fund didn't invest in stocks, which were probably regarded as too risky after the stock market crash of 1772. Because the investments were specified in the prospectus, there was little room for managers to deviate



The deed of incorporation of 'Eendragt Maakt Magt' from 1774.

from this. Eendragt Maakt Magt would therefore nowadays be seen as a passive investment fund, as opposed to an active fund, where a fund manager tries to outperform the market. The annual management fee was low compared to modern standards, about 0.2% per year, which is comparable to the cost of today's passive investment funds.¹⁹⁷

Two fund managers – Dirk Bas Backer and Frans Jacob Heshuysen – were appointed to carry out the investments for the fund. Van Ketwisch himself carried out the day-to-day administration to ensure a separation between the fund's management and administrative activities. Van Ketwisch also intended to publish an annual review of the investment policy. The securities were stored in "eene sufficiente yzere Kist met drie different werkende Slooten voorzien", Dutch for an iron chest with three different locks. The chest could only be opened by the board and an independent notary. The prospectus also reported that the fund would only have a life of 25 years, after which it was supposed to be terminated. Nowadays, such an intention is regarded as highly unusual and would trigger many questions from potential investors.

The world's first value fund

Due to the initial success of Eendragt Maakt Magt, a second fund quickly followed in 1776, introduced by bankers in Utrecht, this time Van Ketwisch was only involved in the role of subscription office. The fund was called Voordelig en Voorsigtig (profitable and prudent) and in its prospectus it referred to Eendragt Maakt Magt as an example of a well-diversified mutual fund. The benefits of diversification across different investments were extensively highlighted in the prospectus. Nothing was certain, but by spreading investments one could be reasonably



The Henrik de Keyser stock exchange in Amsterdam, Roelof van der Meulen, 1816-1833.

sure of generating positive investment returns, it stated; a claim that no financial watchdog today would accept! This fund's investments were very similar to those of Eendragt Maakt Magt. Plantation loans made up 40%, while interestingly enough, the fund could also invest in Eendragt Maakt Magt, something we nowadays classify as a fund-in-fund investment.

Three years later, in 1799, it was Van Ketwich's turn again. His *Concordia Res Parvae Crescunt* (Latin for Eendragt maakt Magt) became the third investment fund established in the Dutch Republic. This fund had an important additional feature when compared to the first two funds: it was actively managed. The prospectus stated that the fund intended to buy securities that traded below their intrinsic value, an investment style nowadays known as value investing and championed by Warren Buffett. The managers didn't have to choose from a fixed list of securities, but could search for bonds that were attractively priced relative to their underlying intrinsic value. In that sense, Concordia can be seen as both the first value fund and the first actively managed investment fund in history.

The predecessor of mortgage-backed securities

All three funds invested heavily in plantation loans, whose structure is similar to that of securitized mortgages. In the years before the 2007 subprime crisis, these mortgage-backed securities were seen as a modern financial innovation, packaging illiquid mortgages into tradable securities. However, few people know that securitization is a 18th century financial innovation and was carried out on a large scale: between 1753 and 1795, no fewer than 240 plantation loans were issued by Dutch bankers.¹⁹⁸ A significant part of the mutual fund's portfolio was invested in these loans, as they offered an attractive yield, much higher than government bonds did.

A century earlier, in 1659, a similar structure was introduced by the Amsterdam banker Johan Deutz, who arranged a 6% publicly issued security for the House of Austria, which was collateralized by the monopoly on Austria's quicksilver mines.¹⁹⁹ The Deutz bankers were also at the forefront of the creation of plantation loans in the 18th century. Willem Gideon Deutz, then major of Amsterdam, created the first loan, called a *negotiatie*, in 1753, making Deutz the undisputed financial engineer in this field.²⁰⁰ At the time of his death in 1757, he had outstanding loans with 89 plantation owners, worth a total amount of 4.6 million guilders.²⁰¹

At first glance, every party involved seemed to profit, so how did these 18th century plantation loans actually work? Bankers arranged a mortgage with a plantation owner, repackaged this into unit trusts, sold this on to investors and then received commodities from the plantation owners. This was a lucrative business for the bankers, as they collected fees at every stage. For investors, the 5 to 6% interest was much more attractive than the prevailing Dutch and English government bond rates, although the associated risks were also higher, as later became evident. For plantation owners, this was an easy way to obtain credit and to open new plantations. In total, Amsterdam banking houses issued around 80 million guilders' worth of plantation loan securities to investors between 1750 and 1773.²⁰² However, as was the case in 2007, the ease with which credit was offered led to an asset price bubble that burst in 1773. Investors suffered large losses and recovered only part of their initial investment.

Brilliant idea, bad timing

Despite being a brilliant financial innovation, the early mutual funds were not successful at all; neither commercially nor in terms of investment returns.²⁰³ In total, the funds only amounted to an estimated 2.5 million guilders, making up only a fraction of the investable assets in the Dutch Republic at the time – an estimated 1.5 billion guilders. Of the 2,000 shares of *Eendragt Maakt Magt* that were sold, the first 1,000 were taken up by investors in the first 6 weeks, but the second 1,000 went less smoothly, as Van Ketwich still had some available in January 1775, even ending up with 40 unsold shares. Interest in the other two funds, however, was even lower: *Voordelig en Voorsigtig* only placed 600 shares, and *Concordia* just 500 in each of the two subscription years in 1779/80 and 1780/81.

Moreover, the investment results of the three funds proved to be highly disappointing. This didn't have anything to do with the investment policy, but with the outbreak of the Fourth Anglo-Dutch War in 1780 which, as had been the case in 1773, had disastrous consequences for the plantation loans the funds invested in. Most of them fell in price and investors had to accept lower coupon payments. The war obstructed the shipping of goods from the Surinamese plantations to Amsterdam, causing revenues to decline sharply. As a result, *Eendragt Maakt Magt* was forced to cut its dividend.

In 1795, the situation became even worse when the Republic fell into French hands and the Dutch colonies were occupied by the British. That year, investors received a special report from Van Ketwich, explaining that not only the plantation loans, but also several European government

bonds had fallen sharply in price. He revealed that the fund had made use of these lower prices to buy back participations, to benefit from the difference between the price and the net asset value of the fund. In this way, he ensured the net asset value was still quoted above par.

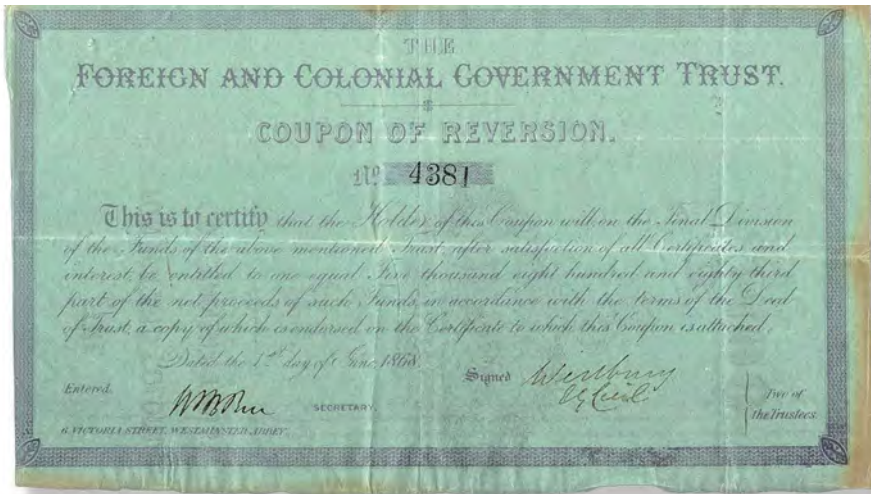
In 1799, the year the fund was scheduled to be terminated, the investors agreed to a prolongation. It seems that Van Ketwisch wanted to wind up the fund above par as it was only finally liquidated in 1824, at a price of 561 guilders. This was little less than a miracle, given that the fund hit a low of 25% of its notional value in 1811, but Van Ketwisch had smartly redeemed units to prop up the price of the remaining participations. Despite his efforts, the first mutual fund in history was anything but a success story. Not for Van Ketwisch, who even had to use his own money to support the investment portfolio, or for the investors, as after 1795 the fund never paid out more than the anticipated 4%.

The second fund, *Voordelig en Voorsigtig*, did not fare better, it seems; although not much is really known about its fortunes. The fund had only 300,000 guilders under management, and no newspaper at the time makes reference to it. It is therefore likely that this fund was liquidated a few years after its introduction. Concordia fared somewhat better. However, as the liquidation price was almost 20% lower than the offering price 114 years earlier, investors and their offspring were not rewarded for their patience. Van Ketwisch's idea of the investment fund was brilliant, but the timing couldn't have been worse. Given the unforeseen macroeconomic circumstances, no investor could have ever blamed Van Ketwisch for this.

The world's oldest surviving investment trust: Foreign & Colonial

After the misfortunes of the first mutual funds, it wasn't until the 1860s that pooled investment vehicles came back into vogue, this time in the UK. A fall in government bond yields and an unprecedented four decades of speculative mania and panic sparked renewed interest in diversified investment funds with an attractive payout. The Foreign and Colonial Government Trust (FCGT) was introduced in 1868 as the first investment vehicle outside the Dutch Republic.²⁰⁴ As the name suggests, the trust invested in foreign securities, mainly issued by countries in the contemporary emerging markets in Europe and the Americas. The trust is the oldest surviving closed-end fund in the world and is nowadays part of BMO Global Asset Management.

The FCGT invested in overseas government debt and its prospectus stated that the trust aimed to give investors of moderate means the opportunity to invest in dividend-paying foreign securities. These overseas bonds gave a higher return than British government Consols, but were also more risky, so diversification was important. The trust's turnover proved very low too, averaging only 2% over the period 1880-1913. The FCGT did exactly what Abraham van Ketwisch had aspired to do – it aimed at diversification and a high payout, all with moderate turnover and at low cost. The FCGT succeeded in generating good investment results. The trust yielded around 8% by investing in bonds from, for example, Austria, Egypt, Latin America, Portugal, Russia and the US. Bonds were supposed to be held until maturity, which explains the low portfolio turnover. FCGT also maintained its conservative and diversified buy-and-hold approach during the upsets of 1890-93 and 1907, which helped it survive these difficult periods.



The success of the FCGT sparked a renewed interest in diversified investment vehicles; by 1875 there were 20 investment trusts listed on the London Stock Exchange with assets of 32 million pounds, investing in both foreign government bonds and American securities.²⁰⁵ London experienced a second boom between 1887 and 1890 when 72 new trusts were listed, some of them with more risky practices such as investing in illiquid securities in Latin America. The boom ended during the Baring Crisis of 1890, after which many investment trusts simply disappeared. FCGT changed its name to Foreign & Colonial Investment Trust (FCIT) as it broadened its investment universe with railway and industrial securities, which offered an attractive yield to investors at the time.

Other early funds and trusts

Another early investment fund was the Belgian Algemeene Maatschappij ter Begunstiging van de Volkswlijt, founded on 23 December 1822 by King William I of the Netherlands, which still included today's Belgium at the time. The fund was above all a participation fund to support and finance industry in the southern Netherlands. The starting capital of 50 million guilders was a large sum by any standards, 30 million of which was supposed to come from retail investor subscriptions. However, the issue was not a success, and the King himself had to subscribe for shares to support the fund. The fund played an important role in the development of Belgian industry in the 19th century, but it was a participation fund and not a classical investment fund, according to Berghuis (1967). The main purpose of the fund was to support the national economy, not to offer a diversified investment portfolio to small investors.

Another well-known 19th century investment trust is the Scottish American Investment Company (SAINTS), which still exists today and forms part of asset manager Baillie Gifford. The trust was founded in 1873 by William Menzies and invested in North American railroad companies.

SAINTS was, in 1873, preceded by the unaffiliated Scottish American Investment Trust (First Scottish), founded by Robert Fleming. Both trusts were founded in Scotland, which experienced an investment trust boom in the 1870s. First Scottish had similar investment objectives to the Foreign & Colonial Trust, offering investors a diversified portfolio with a higher yield than British government bonds. To achieve this yield, the trust invested, like SAINTS, in American railroad companies, and had an active investment approach, unlike the buy-and-hold character of Foreign & Colonial. Robert Fleming was the driving force behind the growth of the Scottish investment trust industry, which developed into a serious investment management profession with characteristics like active management, research and low fees.

The Scottish and English investment trusts served as an example for the 1920s investment trusts in the US, which experienced a boom in the run-up to the great 1929 Wall Street Crash, as described in the opening chapter. Most investment trusts, heavily leveraged and manipulated by insider trading, did not survive the 1929 crash and the subsequent 1930s depression, paving the way for the open-end investment funds we know today. The first open-end fund was introduced in 1924 in the US as the Massachusetts Investor Trust, or MIT. It still exists today and was reorganized in 1969 to become Massachusetts Financial Services, better known as MFS.



Crowds outside the
Stock Exchange, New York,
after the Wall Street Crash,
October 1929

Closing words

In the same decade, in 1929, the Rotterdamsche Beleggings Consortium, better known as Robeco, was founded. A group of seven Rotterdam business men wanted to offer a diversified investment portfolio to small investors, in the spirit of Van Ketwich's innovative idea, 150 years earlier. Nowadays, Robeco is a modern, 21st century investment manager, still based in the Dutch city of Rotterdam but with a global presence. In addition to managing money for our clients, we like to educate our clients with quantitative and qualitative analyses. As Robeco's first investment director Wim Rauwenhoff stated, every investment strategy should be research-driven, and we live and breathe this philosophy to the fullest; fundamental, quantitative and sustainability research forms the cornerstone of all our investment processes. In our quantitative investment strategies, we prefer to use long-term datasets, even going as far back as the 18th century. As well as using deep history data, we also want to understand the historical background.

Therefore, I hope this book has helped you to put today's financial markets into a historical context from a more qualitative and narrative perspective. It has certainly helped me to better understand the industry we are working in, and how important and especially how difficult it is to stick to the virtues of humbleness and patience.

Nevertheless, this is exactly what we aim to do when managing our client's money.



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 130. Macleod (1986).
 131. Macleod (1986).
 132. Chancellor (2000), p38.
 133. Chancellor (2000), p38-39.
 134. Murphy (1999), p169.

135. Murphy (1999), p100.
136. On Defoe, see Mitchell (2012).
137. Cited by Kindleberger (2006), p197.
138. See for example Murphy (1999), p71.
139. Chancellor (2000), p52.
140. Gerding (2016), p69.
- 7. The remarkable stock market bubbles of 1720**
141. Gleeson (2000), p12-13, describes Law as “big in every sense, over six foot tall with ambitions that were larger and more daring than everyone else. Women were spellbound by his impeccable dress, charming manner and sexual charisma”.
142. On Law’s System, see for example Gleeson (2000) and Ferguson (2009).
143. Ferguson (2009), p146
144. On the South Sea Bubble, see for example Chancellor (2000 and Dale (2004).
145. Chancellor (2000), p63.
146. Dale (2004), p101-102.
147. Chancellor (2000), p75.
148. Chancellor (2000), p73.
149. Cited by Chancellor (2000), p82.
150. Chancellor (2000), p72.
151. Dale (2004), p136.
152. Chancellor (2000), p93.
153. Kroeze (2007), p46.
154. Groeneveld (1940), p31.
155. Kroeze (2007), p49.
156. Gelderblom & Jonker (2009), p9.
157. Kroeze (2007), p51.
158. Kroeze (2007), p54.
159. Slechte (1982), p108-109.
160. Kroeze (2007), p55.
161. This paragraph draws from *The Great Mirror of Folly. Finance, Culture and the Crash of 1720* (2013).
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162. Isabel Schnabel and Hyun Song Shin (2003), *Foreshadowing LTCM: The Crisis of 1763* and Stephen Quinn and William Roberds, *Responding to a Shadow Banking Crisis: The Lessons of 1763* (2012).
163. Buist (1974), p5 and p8.
164. Van Dillen (1970), p523.
165. Jonker & Sluyterman (2000), p122.
166. Jonker & Sluyterman (2000), p122.
167. Jonker & Sluyterman (2000), p121.
168. Jonker (2013), p20.
169. Neal (2015), p136.
170. Schnabel & Song Shin (2003), p15-16.
171. De Vries & Van der Woude (1999), p154.
172. On the parallels with the Lehman crisis, see Quinn & Roberds (2012).
173. Schnabel & Song Shin (2003), p16.
174. Schnabel & Song Shin (2003), p19.
175. Schnabel & Song Shin (2003).
176. Jonker (2013), p14.
177. Liedtke (2009), p21
178. Goodspeed (2015), p1.
179. Goodspeed (2015), footnote on p4. The footnote explains how there is confusion about which Monday in June 1772 was considered Black Monday.
180. Goodspeed (2015), p4.
181. Wilson (1966), p173.
182. Van der Woude & de Vries (1997), p155.
183. Wilson (1966), p174.
184. Wilson (1966), p176.
185. Van der Woude & de Vries (1997), p155.
186. Wilson (166), p174.
187. This paragraph draws from Ferguson (1998), *The House of Rothschild, Money’s Prophets 1798-1848*
188. Ferguson (2009), p85.
189. Ferguson (1998), p125 and Chancellor (2000), p98.
190. www.economist.com: A brief history of financial crises.
191. Fodor (2002), p8 and www.economist.com: A brief history of financial crises.
192. Chancellor (2000) and www.economist.com: A brief history of financial crises.
193. Chancellor (2000), p107. Interestingly, in parliament Lord Liverpool publicly warned of speculative excesses, stating that investing in the new joint-stock companies could be a risky business for investors. Chancellor (2000), p108.
194. www.economist.com: A brief history of financial crises.
195. Chancellor (2000), p110.
196. Chancellor (2000), p112.
- 9. The Birth of the Mutual Fund (1774)**
197. Rouwenhorst (2004), p7.
198. Frehen, Goetzmann & Rouwenhorst (2012), p290. The plantations are an even more controversial part of Dutch history than the VOC (Chapter 5), as the Dutch employed slaves from Africa to work on the plantations.
199. Frehen, Goetzmann & Rouwenhorst (2011), p5.
200. De Vries & van der Woude (1997), p472.
201. Hoonhout (2012), p13.
202. De Vries & van der Woude (1997), p143.
203. This paragraph draws from Berghuis (1967).
204. Unless stated otherwise, this paragraph draws from Chambers & Esteves (2014).
205. Morecroft (2017), p114-115.

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