HARVARD | BUSINESS | SCHOOL

9-207-084

FEBRUARY 28, 2007

MALCOLM BAKER

ALDO SESIA JR.

Behavioral Finance at JP Morgan

Behavioral finance is the study of how investors make decisions—and how these decisions affect stock prices and broad market movements. Investors are human, and humans aren't perfectly rational. When they buy on emotion, they not only jeopardize their own investment plans, but also create opportunities for others in the market.[1]

In the three years since a 2003 launch in the United States, JP Morgan's behavioral finance products had attracted new assets at a rapid pace. The Asset Management unit at JP Morgan had been a pioneer in what it termed "Behavioral Investing." It had over a decade of experience since 1992 when it offered an initial retail product in the United Kingdom.[2] In the late 1990s, JP Morgan offered a wider range of mutual funds in the U.K. and Europe, and began to focus its efforts on the larger U.S. market.

On the investment side, Chris Complin, chief investment officer (CIO) for behavioral finance products globally, had all five new products in the top 20% of their Lipper categories.[3] This provided confirmation for a concept that been successfully applied internationally. On the business side of the Asset Management unit, Richard Chambers, the head of U.S. and European marketing, had given investor psychology a central role in the branding of the new funds. The idea that well documented behavioral biases could create opportunities for JP Morgan's investment managers seemed to resonate with retail investors.

Competing asset managers used similar investing principles, but few had gone as far in embracing psychology and behavioral finance in the retail market. So far, JP Morgan's approach had been successful. By the third quarter of 2006, total assets under management in U.S. funds had risen

---

[1] JP Morgan Asset Management, *Behavioral Finance Strategies: What It Means to Invest in JP Morgan Intrepid Funds*.

[2] Founded by academics in the early 1990s, LSV Asset Management and Fuller and Thaler Asset Management also had a distinctly behavioral finance approach. Fuller and Thaler funds were distributed by JP Morgan under their *Undiscovered Managers* brand. However, most of their assets under management were from institutions, not retail investors and brokers, such as Merrill Lynch and Smith Barney. The Dreman funds, distributed by DWS Scudder, were the main retail competition in the United States., with large, mid-cap, and small value fund offerings. Many other asset managers, while not appealing explicitly to behavioral finance, nonetheless appealed to investor psychology as a basis for generating above average returns or used quantitative strategies, grounded in investor underreaction and overreaction to information.

[3] This performance was for the most recent 1-year and 3-year periods. Source: JP Morgan, *Intrepid Strategies: Second Quarter 2006*.

Professor Malcolm Baker and Research Associate Aldo Sesia, Jr. of the Global Research Group prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

Copyright © 2007 President and Fellows of Harvard College. To order copies or request permission to reproduce materials, call 1-800-545-7685, write Harvard Business School Publishing, Boston, MA 02163, or go to http://www.hbsp.harvard.edu. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of Harvard Business School.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

from $100 million in the first quarter of 2003 to over $20 billion. Overall, JP Morgan now managed more than $76 billion in behavioral strategies worldwide. The challenge was for Complin to continue the winning streak on a larger scale, as they had done across Europe, even as competition from other investment managers intensified. And, for Chambers, the goal was to solidify JP Morgan's behavioral finance brand with retail brokers.

JP Morgan

JP Morgan Chase & Co. was a leading global financial services firm with assets of $1.3 trillion and operations in more than 50 countries.[4] The company's earliest predecessor organization dated back to 1799. Key transactions which led to the formation of JP Morgan Chase included the 2000 merger between JP Morgan and Chase Manhattan, combining four of the largest and oldest money center banking institutions in New York City (JP Morgan, Chase, Chemical, and Manufacturers Hanover) into one firm. In 2004, the company merged with Bank One and acquired Highbridge Capital Management, a New York-based hedge fund with $7 billion under management.[5]

The company was organized into six major business segments under three brands: The Investment Bank and Asset Wealth Management (JP Morgan brand), Treasury & Securities Services (JP Morgan Chase brand), Commercial Bank, Card Services, and Retail Financial Services (Chase Brand). (See **Exhibit 1** for financial summary.)

Under the JP Morgan brand, the Investment Bank provided clients—corporations, financial institutions, governments and institutional investors worldwide—with merger and acquisition advice, capital raising, restructuring, risk management and research. In addition, the bank participated in proprietary trading and investing and market-making in cash securities and derivative instruments around the world. Also, under the JP Morgan brand was the Asset & Wealth Management segment described below.

Under the JP Morgan Chase brand, Treasury & Securities Services delivered payment, collection, liquidity and investment, trade finance, commercial card and information solutions to clients. Clients included corporations, financial services institutions, middle market companies, small business, and governments and municipalities.

And under the Chase brand, the Commercial Bank had 25,000 clients and provided, through itself or by partnering with other JP Morgan Chase units, lending, treasury services, investment banking and investment management to corporations, municipalities, financial institutions and non-profit entities with annual revenues which typically ranged from $10 million to $2 billion. Card Services with more than 110 million credit cards in circulation was one of the largest credit card issuers in the U.S. Retail Financial Services provided consumers and small business owners with banking services and products, including checking and savings accounts, credit, certificates of deposits, home and auto loans, insurance, and cash management.

The Asset & Wealth Management Segment

The Asset & Wealth Management segment provided investment and wealth management services for institutions and individuals. The group managed clients' assets through three key business units:

[4] JP Morgan Chase website, at www.jpmorgan.com.

[5] David Wells, "Getting in shape for business," *The Financial Times*, December 5. 2004, accessed on Factiva, December 2006.

Do Not Copy or Post

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

the Private Bank, focusing on wealth management for the most affluent clients, with $25 million or more in net assets; Private Client Services (PCS), focusing on wealth management for clients who were merely rich, with more than $1 million and less than $25 million in net assets; and Asset Management, focusing on developing financial products for retail and institutional investors as well as for the Private Bank and PCS.

At the end of 2005, the three units collectively had $1.15 trillion of assets under supervision and $847 billion of assets under management (AUM).[6] (See **Exhibit 2** for a breakdown of revenue and assets by unit.) According to *Global Investor*, JP Morgan was the seventh largest asset management company in the world in 2005.

Private Bank

A part of JP Morgan's heritage businesses, the Private Bank was a global wealth management leader that aimed to deliver the highest quality advice, service, capabilities and products to high net worth individuals and families in 36 countries around the world. Clients, including 40% of the Forbes Billionaire List, wanted to create a legacy and wealth for many generations.

The Private Bank addressed every facet of wealth management from investment management and brokerage to tax and estate planning, credit, raising capital, and specialty wealth advisory services. Leveraging all the capabilities of the larger firm—including the Asset Management unit—advisors worked with experts in securities sales, investment management, trust and estate planning, and credit.

Chambers commented, "What drives performance of the portfolio of high net asset clients is asset allocation opposed to a single product." The portfolio managers in the Private Bank focused on building portfolios, while the Asset Management unit delivered individual building blocks. For example, the Highbridge acquisition allowed the Private Bank to satisfy its clients' demand for hedge fund products in house. This was typical. The Private Bank first looked to JP Morgan products and services. But, when client needs or preferences dictated otherwise, the bankers would go outside the JP Morgan umbrella.

Private Client Services (PCS)

A part of the old Bank One and headquartered in Columbus, Ohio, Private Client Services also provided wealth management. But, the focus was on clients with less than $25 million in assets. Clients were more interested in protecting and growing their assets for their immediate family.

Asset Management

Both the Private Bank and PCS were relationship businesses designed to leverage the capabilities of JP Morgan. They relied heavily on the Asset Management unit to provide their clients with both standard and customized products.

Headed by Paul Bateman, the Asset Management unit delivered financial products to institutional and retail clients worldwide—governments, corporations, endowments, foundations and individual investors. The group provided the full spectrum of U.S., non-U.S. and global investment management products—from traditional cash management, equity, fixed income and asset allocation to alternative

[6] JP Morgan Annual Report, 2005, p. 52.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

asset classes, such as private equity and real estate. The group offered mutual funds in U.S. and international equities, taxable fixed income, tax-exempt fixed income, money market, and asset allocation products. The Asset Management unit worked directly with clients and their intermediaries, including the Private Bank and PCS.

Of the $847 billion in AUM worldwide, equity products accounted for $370 billion. (These figures included a total of $197 billion managed directly by the Private Bank and PCS.) The next largest category at $238 billion was in its cash management business, primarily money market and cash funds designed for institutions and corporations. Fixed income, at $165 billion, and alternative assets classes, such as private equity and real estate, made up the rest, at $74 billion. The Highbridge acquisition had added $7 billion to the total. Two-thirds of the total was in U.S. securities. As far as client mix, the assets were divided between institutional ($481 billion), the Private Bank and PCS ($197 billion combined), and retail ($169 billion).[7]

The unit was divided into two groups. The business side was organized by client into institutional, retail, and retirement plans within the U.S. and by geographic region into Europe, Asia, and Japan outside the U.S. Chambers and his marketing team reported to George Gatch, CEO of U.S. Retail, and James Broderick, the CEO of the European business.

Bateman took a more active role in the investment side, with four CIOs for equities, fixed income, real estate, and private equity reporting directly to him. Highbridge had remained independent, with the exception of a new JP Morgan market neutral fund where Highbridge was to be the sub-advisor. Complin and his investment team reported to Martin Porter, the global CIO of equities. The business side managed the marketing and distribution of JP Morgan mutual funds and other investment products, leaving the portfolio managers (PMs) to focus on stock selection and portfolio formation.

A group of client portfolio managers (CPMs) acted as the interface to distribution and key clients. While they were not involved in the day-to-day portfolio management process, CPMs had deep knowledge of the investment philosophy and the mechanics of behavioral finance strategies. The role of the CPM was to communicate this information to institutional investors and brokers. Jonathan Golub took the lead CPM role for U.S. retail products, including the behavioral finance funds. At investment conferences and in conference calls, Golub offered his views on broad capital market trends and gave detailed information on the investment process at JP Morgan.

Behavioral finance was by no means the only approach to equity investment at JP Morgan. (**Exhibit 3** shows a representative list of U.S. JP Morgan retail equity funds organized by strategy, with AUM for the third quarter of 2006.) In addition to the **behavioral platform**, assets were spread over a mix of qualitative and quantitative approaches. Typically, portfolio managers would use the insights of a global network of buy-side analysts. These analysts, all with deep industry knowledge, were focused on producing bottom-up forecasts of financial performance, including earnings, dividends, and cash flow. In the **research model platform**, these served as inputs to a proprietary dividend discount model (DDM) used to rank stocks according to the ratio of fundamental value to price. Rankings formed the basis of a portfolio optimization process. A new Highbridge statistical fund was also in this category, though it did not rely on the analyst network. The **manager driven platform** and the **other platform** were more eclectic in investment style.

[7] JP Morgan Annual Report, p. 52.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

Behavioral Finance

JP Morgan's behavioral finance process began in 1992 in London. Even in 2006, two thirds of the $76 billion AUM in behavioral finance products was in non-U.S. stocks. Andrew Spencer, the CIO for European equities at the time, developed the company's first behavioral finance mutual fund in 1992. The fund, called Premier Equity Growth, was offered only in the United Kingdom. It had an enviable track record, beating its benchmark in nine of its first 10 years. And, JP Morgan introduced two new funds that used the same principles, U.K. Strategic Value and U.K. Dynamic.

When Spencer retired in early 2006, he passed the reins to his protégé Complin who had been with him since the early days of the strategies in the U.K. Under Complin's direction, JP Morgan continued to successfully gather assets in Europe and under the Intrepid brand in the U.S., doubling AUM in the U.S. funds since Spencer's retirement. (See **Exhibit 4** for performance of the Intrepid funds, excluding the small multi-cap fund.) By the end of 2006, Complin's team consisted of 53 investment professionals in the U.K., 12 in the U. S., and 12 in Asia.

Investment Philosophy

Traditional finance theory held that investors were rational, or if they were not, that sophisticated investors would trade aggressively and force stocks to be accurately priced. Eugene Fama made this argument persuasively in the 1960s and, by the late 1970s, it had become academic orthodoxy.[8] The early 1980s marked a turning point. Anomalies in stock prices and a new behavioral finance theory emerged, built on the psychology of Daniel Kahneman and Amos Tversy, whose collaborative work earned the 2002 Nobel Prize. Early contributions by Robert Shiller and Richard Thaler cast doubt on Fama's efficient markets hypothesis.[9] One of Golub's favorite pictures in his JP Morgan *Market Insight Series*, reproduced in **Exhibit 5,** showed the performance of Russell index portfolios sorted by standard deviation.

Golub commented, "Modern Portfolio Theory and efficient markets tell us that investors take on additional risk only when they are compensated by more return." But, even the basic idea of a risk return tradeoff was not supported in stock market data over the past 20 years. Complin and his team believed that irrational investor behavior led to market anomalies that could be exploited with a disciplined trading approach.

The starting point for Complin's investment philosophy was the empirical evidence from both academic and practitioner studies that stocks with specific characteristics had outperformed, consistently, over time.[10] Cheap stocks had outperformed expensive stocks over the 55 years ending

[8] Early contributions to behavioral finance included: Robert Shiller, who argued that stock prices were too volatile given realizations of fundamentals; and Werner DeBondt and Richard Thaler showed that individual stocks tended to mean revert.

[9] Bradford De Long, Andrei Shleifer, Lawrence Summers, and Robert Waldmann developed early models of the limits to arbitrage, which helped to explain why sophisticated investors had a limited appetite for correcting mispricing. Unlike in traditional finance models, real arbitrage involved costs and risks that rational investors were sometimes unwilling to bear.

[10] Prominent contributions to academic research on efficient market anomalies included: Rolf Banz showed that small stocks tend to outperform large stocks; Sanjoy Basu found that stocks with low valuation ratios, like the ratio of price to earnings, also tended to outperform; Victor Bernard and Jacob Thomas extended early work by Ray Ball showing that the prices of stocks with earnings surprises were likely to continue to drift upward; and Narasimhan Jegadeesh and Sheridan Titman showed the profitability of momentum strategies. The meaning of these empirical findings was still hotly debated. Some argued that these characteristics were proxies for firm risk and others maintained that they reflected mispricing, and hence underlying behavioral biases.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

in 2005. And, the best recent performers had outperformed the worst recent performers.[11] (See **Exhibit 6** for complete results.) Golub commented:

> These anomalies are glaring. Analysis shows that this outperformance cannot be explained by risk, so something else must be at work. We believe that that something is the collective impact of human psychological biases on markets.

Drawing on academic research in psychology and behavioral finance, JP Morgan emphasized two behavioral biases: **overconfidence** and **loss aversion**. Complin and Silvio Tarca, the lead portfolio manager of the Intrepid funds, believed both were pervasive and persistent in influencing investing decisions and key to explaining the existence of value and momentum anomalies. Each bias was grounded in psychology, with an application to financial decisions and an implication for stock prices. Of course, there were other biases relevant to financial decisions, and at times Chambers had used a broader set in marketing the Intrepid funds. (See **Exhibit 7** and **Exhibit 8** for one page summaries of **recency** and **anchoring**.) But, Complin and Tarca argued that overconfidence and loss aversion were the most powerful effects on stock prices.

Chambers defined overconfidence, in his marketing materials, as the tendency of individuals to overestimate their own ability. (See **Exhibit 9** for a one page summary on overconfidence.) He pointed to surveys of drivers, for example, where more than 80% believed they were "better than average." Complin elaborated:

> When it comes to investing, people believe that each decision they make will be better than it actually is. This leads to more decisions (and hence trading) and a tendency to pursue winning stocks for short term outperformance. This is the antithesis of a long-term, slow-burn strategy like value investing. Overconfident people have great difficulty being systematic value investors, particularly when value looks like it isn't working. This in turn means that they miss out on the persistent tendency of value stocks to undergo massive mean reversions and outperform for extended periods.
>
> Our approach, which forces our funds to systematically overweight value stocks, means that our investment behavior is changed. We are forced to focus on out of fashion stocks that we wouldn't naturally have bothered with and that means that we cannot fall into the same overconfidence trap.

Chambers defined loss aversion as the tendency of individuals to seek pride and avoid regret in their decisions. He pointed to a study that illustrated the **disposition effect**: in a large sample, individual investors were twice as likely to sell winning positions – stocks that had gone up – as losers.[12] Complin added:

> When you buy a stock and it goes up, it's easy to make the decision to sell that stock because you're just taking profits – an easy thing to do psychologically. If your stock goes

[11] More specifically, a JP Morgan study showed that a consistent strategy of the cheapest stocks (defined as the bottom 10% of a universe of 3000 stocks sorted on the ratio of price to sales) at the beginning of each year and holding them in equal proportions for a one year period produced an average annual return of 15.8% over the 55-year period ending in 2005. A strategy of buying the most expensive stocks in the same way produced an average annual return of only 2.8%. Likewise, buying the best performers over the previous year returned 15.2%; and buying the worst performers returned only 3.4%. Source: JP Morgan Asset Management Calculation, based on James O'Shaughnessy, *What Works on Wall Street*, McGraw-Hill, 1998. Data cover the period from 1951-2005. These results were equally weighted across stocks within each decile portfolio and did not take into account costs of trading.

[12] Brad Barber and Terrance Odean, "The Courage of Misguided Convictions," *Financial Analysts Journal*, November/December 1999.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

> down, however, selling it represents the final, irrevocable admission that you've made a mistake. For markets, the consequence of the disposition effect is that the movement of stocks in either direction is slowed down. Stocks don't immediately reach a new price warranted by the information that they have just released – as efficient market theory would have you believe. They take time to get there. That's why momentum investing works. Our approach requires a systematic tilt to momentum, forcing us to run our winners and cut our losers. It also forces our investors to re-evaluate stocks which have done well for a long time but are now starting to disappoint.

Built on both data and insights from psychology, JP Morgan's investment philosophy held that these long term market effects were the direct result of the collective impact of human behavioral biases on the markets. Complin summarized:

> We think that nothing other than human behavioral biases can explain why value and momentum stocks have outperformed for 55 years, and probably longer if we only had the data. Human behavior at this deep psychological level doesn't change. The basic tendency to be overconfident, to seek pride and avoid regret was there 50 years ago and it will be there in another 50 years. In theory this means that, provided we don't change our investment process, we will still be outperforming in 50 years time.

Implementation

The implementation of the investment philosophy had three parts: stock selection, portfolio construction, and execution.

When Spencer started out in 1992, the stock selection process involved little computing power. He and a couple of colleagues would sift through as many stocks as possible by hand to determine which had the best combination of value and momentum. The modern version of the process was more industrial, largely because it was used in so many portfolios for so many clients. A quantitative stock selection model was used to rank stocks based on behavioral characteristics, but, as Golub pointed out, "We are trying to identify stocks with good valuations and news flow, and the news flow component can be subjective. We have a team of over 50 analysts in the U.K. and most of them are analyzing qualitative data not building quantitative models." Complin described this as "industrialized common sense":

> The model is not a substitute for thinking, but a tool to help you get to the stocks which really do have the characteristics, such as value and momentum, which we know are associated with long term outperformance. Fundamental bottom-up processes are subject to the behavioral biases of the fund manager, but so are quant processes which rely on subjective views as to whether a particular factor will outperform in the coming months and should therefore be included in the model.
>
> What really matters is the extraordinary investment environment we have created – our fund managers know that they will make money by simply setting out to do the opposite of what most people "feel like" doing and they are doing this in an environment where it is absolutely clear what constitutes a good stock and what constitutes a bad stock – suddenly, decision making becomes infinitely easier than it is for most investors and achieving consistent outperformance across a vast range of different strategies becomes possible.

After stock selection came portfolio construction and execution. With the help of an optimizer, portfolio construction involved maximizing exposure to stocks with value and momentum, while

Do Not Copy or Post

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

controlling other risk exposures, such as overall risk, sector exposures, the total number of securities, and the size or style classification of the particular fund with the help of an optimizer. The result was a portfolio consistently long value and long momentum, with other risks squeezed out of the portfolio. Tarca elaborated:

> While stock selection identifies securities with good value and momentum characteristics, the importance of portfolio construction should not be underestimated. Many portfolios underperform because they are taking risks that the portfolio manager is unaware of. In our portfolios, stocks are systematically combined in such a way as to produce a barbell portfolio which is cheaper than the market and has better momentum than the market - a kind of "super-stock."

The Intrepid Funds

The Intrepid branded behavioral finance funds were only sold to retail clients located in the U.S. The first fund, later named JP Morgan Intrepid European Fund, launched in November 1995, invested primarily in equities securities issued by companies with principal business activities in Western Europe. The second fund, later named the JP Morgan Intrepid International Fund, commenced operation in April 2001. The fund primarily invested in equity securities of companies from developed countries other than the U.S.

In February 2003, the Asset Management unit's behavioral finance team launched four new behavioral finance funds investing in U.S. equities: Intrepid America, Intrepid Growth, Intrepid Value, and Intrepid Multi Cap. Tarca took over a fifth, existing Intrepid fund at the end of 2004.[13] The U.S. Behavioral Finance team established these funds to sell to retail customers, however over time institutional investors had become increasingly interested as the funds developed a longer track record. Also, the JP Morgan Private Bank had invested heavily in behavioral finance products on behalf of its ultra high-net worth clientele. Each fund, like its European predecessors, was actively managed to capitalize on the emotions that often caused people to make more poor investment decisions. The performance had been impressive so far. Each fund was above its Lipper category average, and the Intrepid Value was ranked first of 400 funds since its inception in 2003.

The Intrepid funds were typically sold through retail brokers with a 5.25% sales charge and an expense ratio of 1.25%. (See **Exhibit 10** for a listing of expenses for the Intrepid funds.)

Advising Services

In addition to offering behavioral finance investment products, the Asset Management unit also helped advisors apply psychological, anthropological, and behavioral finance principles to their own business of serving affluent clients. Susan Hirshman, managing director and wealth strategist, was JP Morgan's guru, lecturing at major conferences and developing training guides for advisors.

> The struggle you have today is that you have a whole group of advisors who were brought up in this industry who care about R-Squared, information ratio, capital markets, and who love to talk about these things with their clients… We all use the same processes, like Monte Carlo simulations; we all offer the same technology, the same products in an open architecture… As an advisor, what is your competitive advantage? Why should someone work with you over

[13] The inception of the *Intrepid Mid Cap* was in 1983, but Tarca's team took over management in December 2004.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

your competition? You need to differentiate yourself from the pack—and if it's not process or product—if these are somewhat commoditized—it has to be by using a behavioral approach.

Hirshman argued that the key to serving clients was to understand needs and wants. Needs could be ascertained by understanding clients' demographics, which advisors knew how to do. However, understanding clients' wants required psychographics. JP Morgan worked with Larry Samuel, a cultural anthropologist, to develop a system to identify the distinct emotive values which drove client investor behavior. Samuel classified millionaires into five wealth signs: Good Life, Artisan, Unplugged, Legacy, and Wellville. The process required advisors to ask clients a series of questions to gain insight into their profile. Key words that emerged from the client's answers revealed their wealth sign. (See **Exhibit 11** for more on wealth signs.)

The keywords were also connected to certain emotive values which drove clients' behavior. JP Morgan called these emotive values "passion points" and identified them for each wealth sign. Unlike traditional research which relied on what clients said, passion-based research was steeped in emotion—that is, what drove the decision making process of the affluent client beyond logical or rational thinking. To augment the passion points, Hirshman created a "cheat sheet" for advisors to collect other core passions of their clients either through observation or inquiry. The contention was that investment decision-making followed the 80-20 rule: 80% emotion and 20% fact.

Once advisors identified their clients' wealth sign and passion points, the advisors' next steps were to incorporate that information and customize their language, service, and client review to tap into their clients' emotive-value systems. Hirshman explained **language**, the first component.

> We want advisors to customize their approach when talking to their clients. Specifically they should tailor what they say and how they say it based on which of the wealth signs the client falls under. The ultimate goal is to position strategies that are right for the client in a language they understand and are motivated by. For example, with a "good life" client the advisor would want to stress high regard and reputation, talk about elitism, say that by working together you can 'win' at achieving his or her goals. On the other hand, with an "artisan" client the advisor should discuss how blending asset classes is like the combinations of color in a painting.

The second component focused on **service**. JPM had identified the key service requirements for each wealth sign. For example, advisors working with "good life" clients needed to make them feel important and special, pay attention to details, keep the client up to date on trends, and let them talk about their achievements. For an "artisan" client JPM recommended that the advisor be less formal, try to present their investment strategies in a visual way, tell it in a story, take time to explain new concepts or portfolio changes.

The third and final component of the JPM program was advisors putting to use their behavioral-oriented language and service skills at **client reviews** to capitalize on applying a behavioral approach to client relationships. Hirshman explained:

> I tell the advisors that your client is coming in for a review, so what do you do? You spend a half hour, look over the numbers. But do you ever take the time to ask just who is your client, what do they want out of life, what drives them? And if you don't know and don't customize your approach with them then you are merely a performance reporter—and thus you will only be temporarily working with your clients. As soon as performance is off so is the client.

JP Morgan created a guide to enhance the overall impact of client reviews. Hirshman explained that a key component of this process in addition to understanding your client's passion points was to understand behavioral biases.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

> It is important that advisors look for the biases of their clients that lead to irrational behavior. For example, some clients are overconfident, that is they tend to overrate their opinions and exaggerate their ability to manage their portfolios. Others can fixate on one piece of data or point of view that is not directly relevant to their long term goals. Those clients are what we call anchored. And finally many clients overemphasize recent events when making investment decisions. This is known as the recency effect. These behaviors then cause clients not to act in their own economic self interest. Many times they end up **not** taking the action required to maintain a coherent investment strategy. The unfortunate thing is that, you can't eliminate these irrational behaviors in your client, so you must manage them. This can only be done through a consistent and repeatable process.

JP Morgan held that if advisors understood their clients' investing biases, it would lead to better relationships with clients and, as a result, to improved client acquisition, retention, and referrals. Hirshman explained, "Competition for the affluent marketplace is getting bigger and fiercer. So it's simply not good enough to have a satisfied client. Advisors need to connect to what their clients want. They need to be behavioralists."

Conclusion

Complin and Chambers had little time to savor the recent successes. Having proven the concept, the team was looking to expand. In January 2006, JP Morgan launched an Intrepid Long/Short product. And in October, the firm announced its plan to roll out behavioral finance products in Japanese equities in 2007.[14] And, challenges remained. The success of the behavioral finance strategies had attracted new competition. Moreover, a wider range of strategies, built on value and momentum, had netted record capital flows, raising the possibility that these anomalies had been arbitraged away.

[14] "Fund Managers: JP Morgan Trust Introduces 'Behavioral Finance' Products," *Nikkei Report*, October 19, 2006.

Do Not Copy or Post

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Exhibit 1 JP Morgan Chase Financial Performance, 2005

Business Segment	Net Revenue ($ million)	Percent Change from 2004	Operating Earnings ($ million)	Percent Change from 2004
Investment Bank	$14,578	16%	$3,658	24%
Retail Financial Services	14,830	37	3,427	56
Card Services	15,366	43	1,907	50
Commercial Bank	3,596	51	1,007	66
Treasury & Securities Services	6,241	28	1,037	136
Asset & Wealth Management	5,664	36	1,216	79
Corporate	(1,126)	NA	(1,731)	NA
Total	$59,149	27%	$10,521	28%

Source: JP Morgan Chase Annual Report 2005, pp. 22, 34 and 35.

Note: Net income for 2005 and 2004 was $8,483 million and $4,466 million, respectively.

Exhibit 2 Asset & Wealth Mgmt Financial Performance, 2004 to 2005 ($billions)

	Total Net Revenue		Assets Under Management		Assets Under Supervision	
	2005	2004	2005	2004	2005	2004
By Business Segment						
Private Bank	$1.689	$1.554	$145	$139	$318	$304
PCS	1.036	.550	52	53	102	94
Asset Mgmt						
Retail	1.544	1.184	169	133	245	221
Institutional	1.395	.891	481	466	484	487
Total Asset Management	2.949	2.075	650	599	729	708
Total	$5.664	$4.179	$847	$791	$1,149	$1,106
By Asset Class						
Liquidity			$238	$232		
Fixed Income			165	171		
Equities			370	326		
Alternatives			74	62		
Total			$847	$791		

Source: JP Morgan Chase Annual Report 2005, pp. 51 and 52.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

Exhibit 3 JP Morgan U.S. Equity Retail Mutual Funds, Marketed in the United States, and Invested in U.S. Securities

Funds Name	Investment Style	Assets Under Management ($M)
Intrepid America	Large-Cap Core	$ 4,900
Intrepid Growth	Large-Cap Growth	1,300
Intrepid Value	Large-Cap Value	130
Intrepid Long/Short	Long/Short Equity	60
Intrepid Mid-Cap	Mid-Cap Core	875
Intrepid Multi-Cap	Multi-Cap Core	22
U.S. Small Cap Core Select	Small-Cap Core	1,100
U.S. Small Co—Institutional	Small-Cap Core	136
Undiscovered Managers Behavioral Value	Small-Cap Core	204
Undiscovered Managers Behavioral Growth	Small-Cap Growth	118
Small Cap Value	Small-Cap Value	889
Intrepid Mid Cap Portfolio	Mid-Cap Core	70
Total Behavioral Finance (12)		$ 9,804
Highbridge Statistical Market Neutral	Equity Market Neutral	724
Market Neutral Fund	Equity Market Neutral	19
Discipline Equity	Large-Cap Core	637
Tax Aware Core Equity	Large-Cap Core	230
Tax Aware Disciplined Equity—Institutional	Large-Cap Core	607
Tax Aware Diversified Equity	Large-Cap Core	227
Tax Aware U.S. Equity	Large-Cap Core	370
U.S. Equity Fund	Large-Cap Core	1,400
U.S. Large Cap Core Plus Select	Large-Cap Core	88
Large Cap Growth	Large-Cap Growth	1,200
Tax Aware Large Cap Growth Select	Large-Cap Growth	51
Equity Income II Select	Large-Cap Value	373
Large Cap Value Fund	Large-Cap Value	994
Realty Income	Real Estate	165
Large Cap Growth Portfolio—Insurance Trusts	Large-Cap Growth	216
Large Cap Value Portfolio—Insurance Trusts	Large-Cap Value	3
Total Research Model (16)		$ 7,304
Equity Income	Equity Income	284
Growth and Income	Large-Cap Value	578
Mid-Cap Equity Select	Mid-Cap Core	294
Mid Cap Value Fund	Mid-Cap Core	7,500
Capital Growth	Mid-Cap Growth	842
Diversified Mid Cap Value	Mid-Cap Growth	1,400
Growth Advantage	Mid-Cap Growth	73
Diversified Mid Cap Value	Mid-Cap Value	887

Do Not Copy or Post

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Funds Name	Investment Style	Assets Under Management ($M)
Value Advantage	Multi-Cap Core	222
U.S. Real Estate	Real Estate	827
Small Cap Equity	Small-Cap Core	777
Dynamic Small Cap	Small-Cap Growth	193
Micro Cap	Small-Cap Growth	5
Small Cap Growth	Small-Cap Growth	554
Strategic Small Cap Value	Small-Cap Growth	5
Undiscovered Managers Small Cap Growth	Small-Cap Growth	295
Diversified Mid Cap Growth Portfolio	Mid-Cap Growth	166
Diversified Mid Cap Value Portfolio	Mid-Cap Value	92
Small Cap Equity Portfolio	Small-Cap Core	3
Total Manager Driven (19)		$14,997
Multi-Cap Market Neutral	Equity Market Neutral	2,000
Market Expansion Index	Mid-Cap Core	661
SmartRetirement 2010	Mixed-Asset	10
SmartRetirement 2015	Mixed-Asset	13
SmartRetirement 2020	Mixed-Asset	39
SmartRetirement 2030	Mixed-Asset	43
SmartRetirement 2040	Mixed-Asset	44
Investor Conservative Growth	Mixed-Asset Alloc Consv	765
SmartRetirement Income	Mixed-Asset Alloc Consv	1
Investor Growth	Multi-Cap Core	1,300
Diversified Fund	Mixed-Asset Alloc Growth	555
Investor Growth & Income	Mixed-Asset Alloc Growth	1,900
Investor Balanced	Mixed-Asset Alloc Moderate	1,800
Equity Index	S&P 500 Index Objective	2,000
Diversified Equity Portfolio—Insurance Trust	Large-Cap Core	146
Balanced Portfolio Class 1	Mixed-Asset Alloc Growth	102
Equity Index Portfolio	S&P 500 Index Objective	138
Total Other (17)		$11,517
GRAND TOTAL		$43,622

Source: JP Morgan U.S. Equity Mutual Funds.

Note: Assets under management ending Q3 2006.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

Exhibit 4 Performance of U.S. Intrepid Funds as of June 30, 2006

	Intrepid America	Lipper Benchmark	Intrepid Growth	Lipper Benchmark	Intrepid Value	Lipper Benchmark	Intrepid Mid-Cap	Lipper Benchmark
Inception date	Feb. 2003		Feb. 2003		Feb. 2003		Dec. 2004	
Investment style	Large-cap core		Large-cap growth		Large-cap value		Mid-cap core	
Objective	Long-term capital growth		Long-term capital growth		Long-term capital appreciation		Long-term capital growth	
Assets under management	$4.5bn		$1.3bn		$72mm		$875mm	
Performance:								
YTD as of Jun 2006	4.2%	2.2%	0.9%	-2.9%	9.0%	4.5%	6.2%	4.3%
1 Year	11.1%	9.1%	8.7%	5.8%	15.9%	10.5%	16.3%	12.1%
3 Year	15.4%	9.8%	6.2%	8.4%	16.6%	12.8%	18.4%	16.4%
Since inception	19.4%	13.4%	16.2%	12.4%	22.5%	16.7%	--	
Market cap	$62.9bn	$76.8bn	$39.0bn	$62.1bn	$74.9bn	$92.3bn	$7.9bn	$7.5bn
Dividend yield	1.9%	1.8%	1.1%	1.2%	2.5%	2.6%	1.4%	1.4%
EPS growth	11.9%	13.0%	16.7%	15.9%	9.6%	10.0%	13.3%	13.8%
Portfolio turnover	75%–150%	N/A	75%–150%	N/A	75%–150%	N/A	75%–150%	N/A
Beta	1.13	1.00	1.09	1.00	1.08	1.00	1.03	1.00
Top 3 holdings	Exxon Mobil		IBM		Citigroup		Kerr-McGee	
	BofA		Google		BofA		Keycorp	
	Citigroup		Amgen		Exxon Mobil		E*Trade	

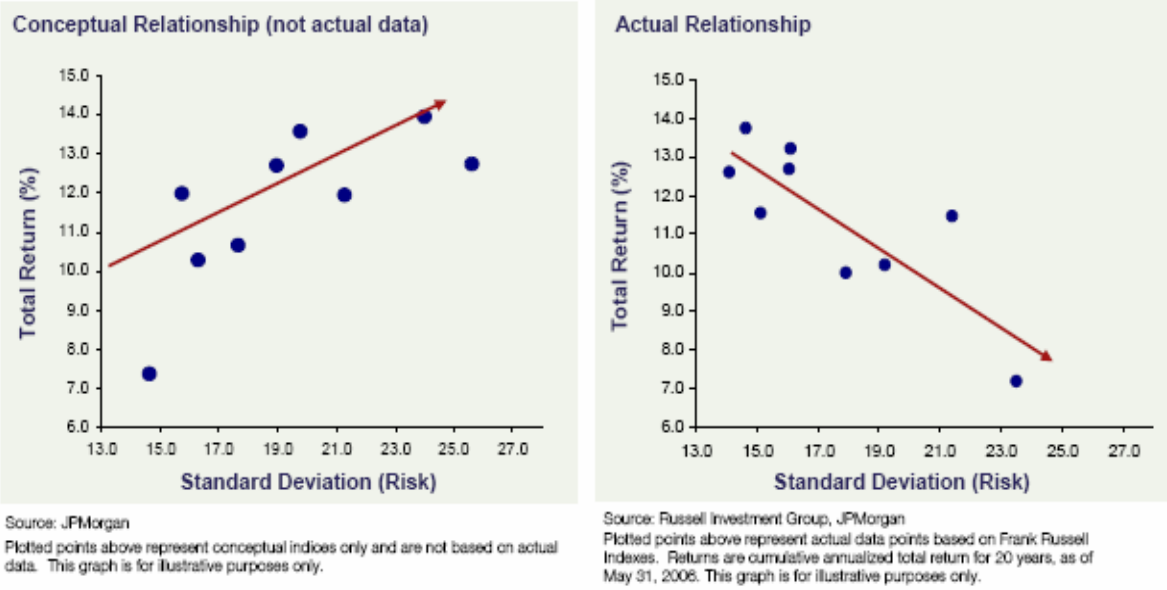
Source: JP Morgan Asset Management Intrepid funds' profiles, August 2006.

Note: The performance results for the Intrepid funds is based on Select Shares.

Do Not Copy or Post

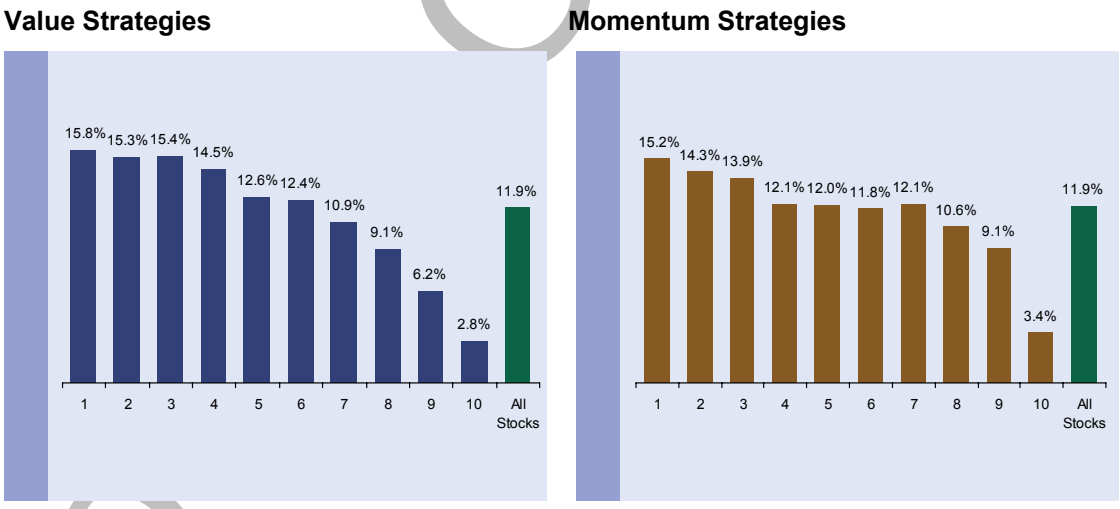
Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Exhibit 5 Risk Return Tradeoff—20 Year History



Source: JP Morgan Asset Management, *Market Insight Series*.

Exhibit 6 Returns to Value and Momentum Strategies, 1951-2005



Source: JP Morgan Asset Management Study, US Market 1951 – 2005: 12 month returns. The methodology is described in footnote 11.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Exhibit 7 Anchoring

What is anchoring?

Investors often fail to do enough research because there's simply too much data to collect and digest. Instead, they take action based on a single fact or figure that should have little bearing on their decision, while ignoring more important information. Psychologists call this irrational behavior "anchoring."

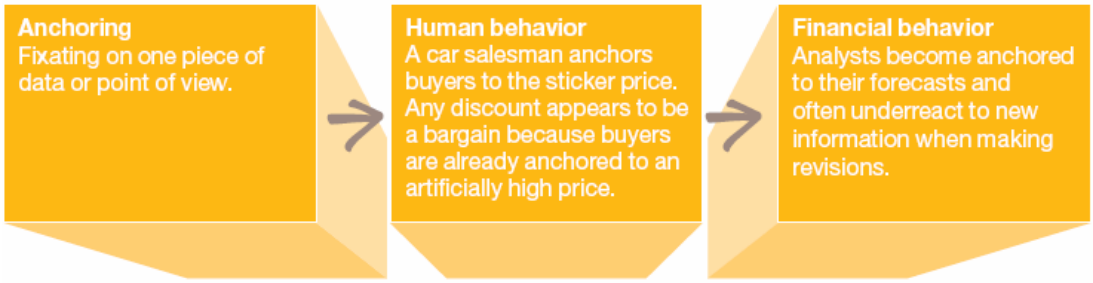
Causing irrational bias in analysts' forecasts

When analysts become anchored to their earnings forecasts, they tend to dismiss any new information that contradicts their original assessment. For example, analysts with a negative outlook for a company ay underreact to any positive news when revising forecasts. As a result, their estimates may lab behind actual earnings rather than anticipate them—creating recurring opportunities in the market.

Market anomaly: earnings

Stocks with upgraded earnings expectations are more likely to improve further because history suggests that all the good news is not yet reflected in analysts' forecasts. Behavioral financial professionals seek to capitalize on this market anomaly by buying stocks with positive earnings revisions and selling their analyst downgrades.

Everyday examples of anchoring:



Source: JP Morgan Asset Management, *Financial Foundations*.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

Exhibit 8 Recency

What is the recency effect?

People tend to overemphasize a company's recent returns when making investment decisions. In many cases, this "recency effect" can influence not only individual stock prices, but also broad market movements. The goal of behavioral finance is to recognize such irrational behavior and capitalize on the potential investment opportunities that result.

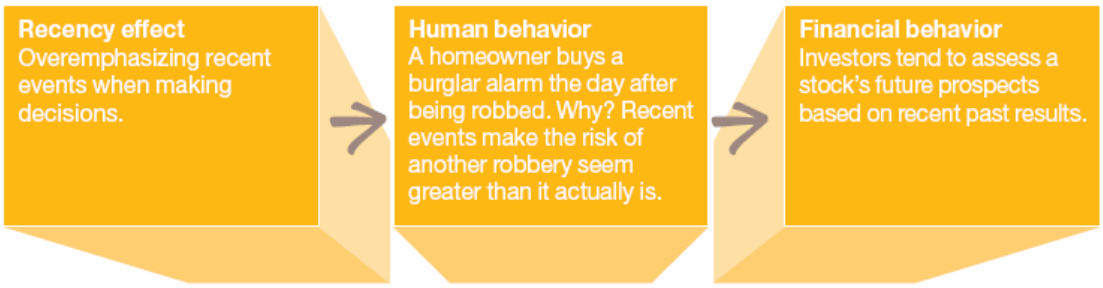
Driving stock prices to irrational highs

Because of the recency effect, stocks tend to continue moving in the direction they've been heading. If certain shares have been rising, for example, investors typically buy ore, which drives prices higher and encourages even more euphoric buying. By repeating this same behavior over time, investors create persistent market anomalies that may be identified and pursued for profit.

Market anomaly: momentum

Momentum refers to the direction and strength of a stock's price movement. History shows that stocks with strong positive momentum continue to outperform over the intermediate term. Behavioral finance professions seek to buy those stocks with positive momentum and then sell when price momentum turns negative.

Everyday examples of the recency effect:



Source: JP Morgan Asset Management, *Financial Foundations*.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

Exhibit 9 Overconfidence

What makes investors overconfident?

Simple human nature explains why investors tend to overestimate their stock-picking skills. In many cases, this overconfidence can cause investors to make decisions using limited information. Instead of analyzing all the financial data now available, they distinguish good companies from bad based solely on brand names, industry reputations, or past results.

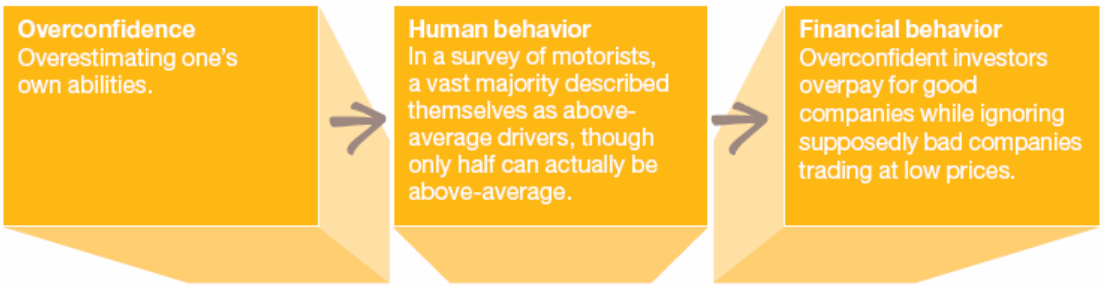
Trading stocks for irrational reasons

Overconfidence is a predictable irrational behavior that can distort stock prices and create persistent market anomalies. For example, when investors rush to buy past winners perceived as good investments, they drive up prices to the point where stocks become overvalued. Meanwhile, supposedly bad companies trading at low prices become even more undervalued.

Market anomaly: valuation

Throughout the market's history, cheap stocks have outperformed expensive ones over long periods of time. This market anomaly presents an opportunity for behavioral finance professionals who seek to identify and buy stocks with low valuations, while selling stocks deemed to be overpriced.

Everyday examples of overconfidence:



Source: JP Morgan Asset Management, *Financial Foundations*.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

Exhibit 10 Retail Charges, Commissions, and Expenses for Equity Funds

Mutual Fund	Amount of Purchase	Sales Charge (Load) as Percent of Offering Price	Commission Fee Paid to Financial Intermediary	Annual Net Expenses Deducted from Assets
Equity Class A	Less than $50,000	5.25%	4.75%	
	$50,000 to $99,999	4.50%	4.05%	
	$100,000 to $249,000	3.50%	3.05%	
	$250,000 to $499,999	2.50%	2.05%	
	$500,000 to $999,999	2.00%	1.60%	
	$1milion or more	0.00%		
	Any amount			1.24% to 1.25%
Equity Class B	Any amount	0.00%	4.00%	1.84%
Equity Class C	Any amount	0.00%	1.00%	1.75% to 1.84%

Source: Sales Charges and Breakpoints, Effective December 22, 2006, via website http://www.jpmorganfunds.com/pdfs/other/salescharges.pdf, accessed on February 9, 2007; JPMorgan U.S. Equity Funds Prospectus, November 1, 2006.

Notes:

(a) Equity Class A funds included JPMorgan International Equity funds, Specialty funds, Tax Aware funds, and U.S. Equity funds, and had front-end sales charges for amounts under $1 million.

(b) Equity Class B shares had no front-end sales charge, but were charged a contingent deferred sales charge (CDSC) if redeemed within six years:

Years since Purchase	CDSC
0-1	5.00%
1-2	4.00%
2-4	3.00%
4-5	2.00%
5-6	1.00%
More than 6	0.00%

Equity Class B shares automatically converted to Class A shares after eight years. There were no sales charges or conversion fees.

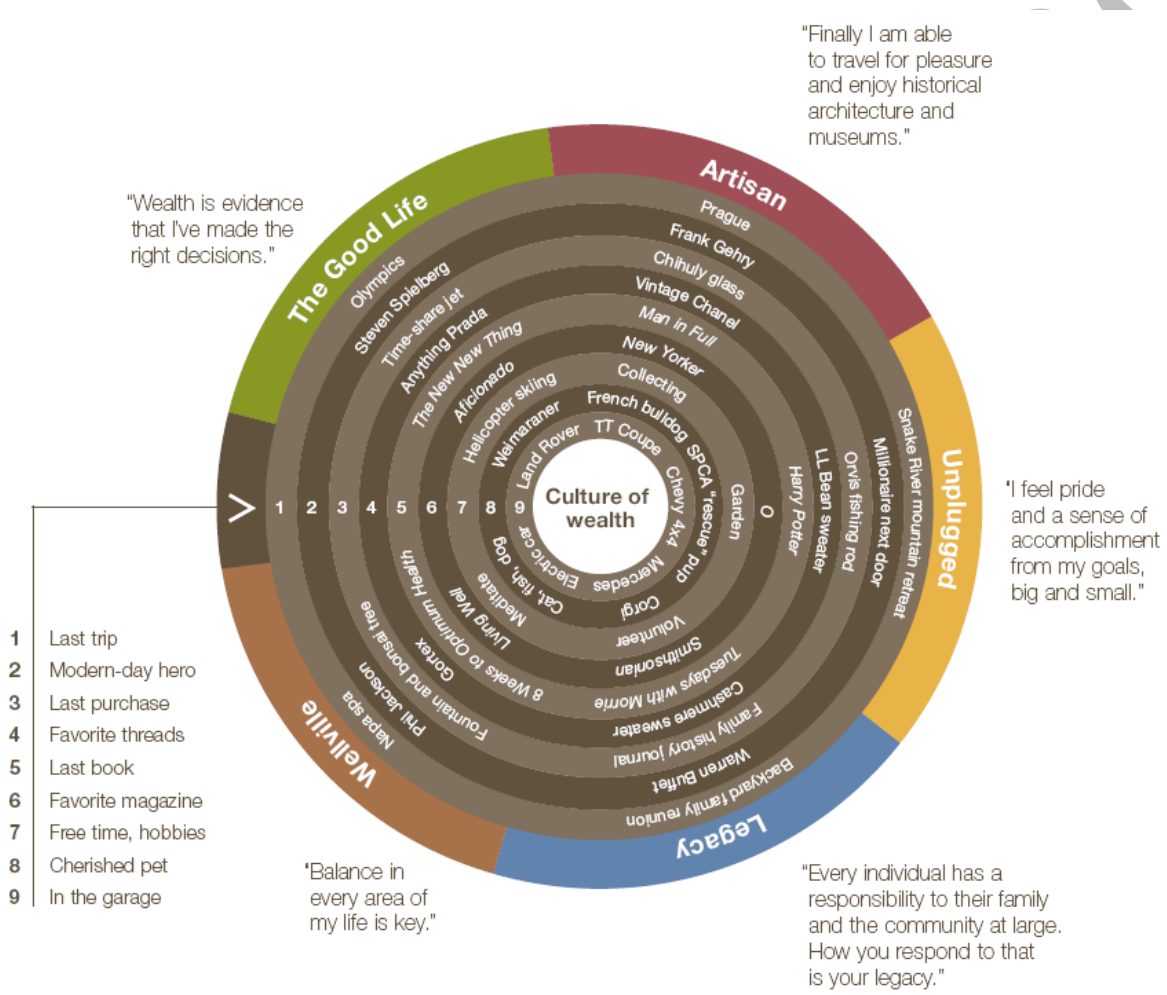
(c) Equity Class C shares had no front-end sales charge, but were charged a contingent deferred sales charge (CDSC) of 1.00% if sold within one year of purchase.

(d) Annual Net Expenses Deducted From Assets applies only to JP Morgan Intrepid Funds.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.

Do Not Copy or Post

(e) **Exhibit 11** Wealth Signs



Source: JP Morgan Asset Management, *Opening Doors to the Culture of Wealth*.

Copying or posting is an infringement of copyright. Permissions@hbsp.harvard.edu or 617-783-7860.