

# Emotional Assets

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## **Abstract**

Globally the number of high net worth individuals (HNWI) is increasing and their interest in investing into the luxury goods sector is increasing at a similar rate. In this paper we use a broad range of indices on a number of emotional assets, such as art, wine, stamps watches, and atlases, which make up more than 50% of HNWI's investment into the luxury good sector. Using the spanning techniques from de Roon et al. (2008) we analyze how the emotional assets add to the risk-return profile of both private and institutional investors. We find highly significant results for wine and books as a significant allocation into the emotional asset sector. Our findings substantiate the current allocation of HNWI in the luxury goods sector.

# Emotional Assets

## I. Introduction

Globally the number of high net worth individuals (HNWI) is increasing and their interest in investing into the luxury goods sector is increasing at a similar rate. From exhibit 1 taken from the Merrill Lynch/ Cap Gemini World Wealth Report 2007 we see that luxury goods, such as cars, shipping and airplanes dominate the type of investment into luxury goods taking a 26% share. Art and Jewelry take the next largest shares with 20% and 18% investments respectively. Investments into sports (clubs, sailing and equestrian etc) make up 6% of the share of HNWI in luxury goods. Other collectable items make up the final sector, into objects such as coins, wine, antiques and travel. Furthermore the growth in the number of HNWI's from emerging markets is striking; with for example more than a 20% rise in the number of HNWI in India alone during 2006 (see exhibit 2).

### **Insert Exhibits 1 & 2**

Given the growth in the interest in luxury goods and the increasing number of HNWI's who spend a relatively larger proportion of their income in this sector, it is of interest to analyse whether this strategy is an optimal strategy from an investment perspective. If not, then the consumption value from these items as collectable items may be larger than currently perceived, and investors willing to give up financial returns for emotional motives.

In this paper we use a broad range of indices on a number of emotional assets, such as art, wine, stamps watches, and atlases, which together make up more than 50% of HNWI's investment into the luxury good sector and analyse the risk and return profile of these various emotional assets using historical data on these collected items. We see how the various assets move in line with each other, and analyse if there are any diversification benefits to holding a varied portfolio of these various emotional assets.

Of interest is how this diversified emotional asset portfolio can add to the risk-return profile of the private or institutional investor. To analyse this more formally we use performance evaluation tests, to test the statistical significance of the difference in Sharpe ratios between the various mean-variance portfolios. This includes the spanning tests from de Roon et al. (2008) to see if the inclusion of emotional assets in the investment set improves the Sharpe ratio of the investment portfolio. An alternative test is to look at the performance of these assets using the M2 ratio (see Modigliani & Modigliani (1997)).

## **II. Emotional Assets**

Why invest in emotional assets? There are a number of reasons why people invest or collect emotional assets. Luxury goods may be bought as a collectable item, purely to obtain and owning a particular piece. The reasons behind this vary, from being passionate about an item to the philanthropic nature of certain collectable items, to the status symbol representing being able to buy a certain collectable item. There is a large literature in wealth management on the life-cycle factors which play a role in investment behaviour. The consumption value from directly owning such luxury goods can be considered a form

of income stream. This is the aesthetic return from admiring a fine painting, or owning a particular edition of a rare book or atlas, or a famous stamp.

In this paper we focus on the investable value of emotional assets. To do so we look at the major collectable items in which an indirect investment may be made into the asset. Rather than own a bottle of wine or stamp collection, the investor owns an indirect share in a wine fund, or a fund of stamp collections. The aesthetic value is lost, and the income stream is zero<sup>1</sup>.

The wine and the art market are the most sophisticated of the luxury good investment sectors. There are currently a number of funds in which investors can buy into. The most established is The Fine Art Fund, launched in 2003 in London, and since then ARTESTATE, Societe Gernal Asset Management, and more recently the Art Trading Fund have all raised sufficient capital to provide investors with an indirect investment into the art market. There is also a move towards more specialised funds focusing particularly on one or two markets, such as Indian Art, Chinese art and Contemporary artists. The majority of these funds actively trade their artworks, ARTESTATE being the current exception, who aims to hold a limited number of artworks for the duration of the closed end fund. This fund also has a low entry level at €2500, whereas many other funds are more focused to the wealthier investor. These funds undertake a variety of trading strategies, similar to both private equity and hedge funds, trading on the inefficiencies currently present in the art market, where low liquidity abounds, bringing immediate trading to at times a highly illiquid market. Returns made by such dynamic trading strategies are likely to lead to higher returns being able to be attained in the market. However for our purposes we would like to be able to gauge what

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<sup>1</sup> In some cases a rental stream can be observed, but is almost always extremely low.

the minimum levels of returns which can be made. We do this by focusing on the average return data collected by Art Market Research on a number of emotional assets. The emotional assets which we focus on in this paper are art and wine, collectables such as stamps, clocks and watches, atlases and books<sup>2</sup>.

### **III. Data**

For the purpose of this comparison we shall focus on the data from Art Market Research since it provides a wider and more frequent source of information. These indices show that historically, average real returns for art are moderate. Returns are generally above inflation, showing a positive real return, with a general upward trend of art price increases in the market.

AMR data is available monthly but only goes as far back as 1976. While a relatively small number of series only start in 1986. Unfortunately the data on diamonds was discontinued after 2000. However, for the majority of the series we have more than 200 monthly observations, which provide sufficient data to provide some basic analysis on the risk and return profile of these various emotional assets. If possible we include data for the 100% range for each sector, however for clocks and watches, and books, jewelry and violins only the central 80% segment of the data is available. This can provide some difficulty with assessing correlation statistics, since some of the more extreme events in the return distribution are not included. Ideally, we would like to include the entire distribution in the indices because this takes into account the extreme price movements in the market which are vital in correlation estimation and the analysis

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<sup>2</sup> Data for alternative forms of Emotional Assets, such as Diamonds, Violins, Coins and Jewelry were not available for the full 20 year sample period, and therefore provide us with only limited observations for testing their additional significance in the optimal portfolio of Emotional Assets.

of diversification benefits. AMR data uses average returns on a 12 month moving average. This also induces a high degree of smoothing into the data series. This can also be problematic, and the data can be unsmoothed, using techniques applied to other appraisal based series (such as real-estate, and private equity data), to find the true underlying volatility in the data. This is extremely important as too smooth an index shall underestimate the amount of volatility in the return distribution and hence the degree of risk characterized by the particular emotional asset. Since we are trading off returns by the amount risk, if the risk is uncharacteristically low, the emotional asset shall look as though it has a much higher level of risk adjusted returns than is actually the case. We investigate this later in the paper. Imperative is also the notion the risk is correctly defined by the degree of volatility in the distribution, and in choosing so we assume that the historical return distribution is correctly parameterized by the use of the normal distribution. There are a large number of other risks for these types of luxury goods and collectable items which may not in fact be captured by the degree of volatility in the empirical distribution of returns. For example theft, fraud, liquidity risk may all find themselves appearing in large negative movements in prices, and hence extreme returns, which manifest themselves in higher moments of the return distribution in the guise of fat tailed observations. This should be an aspect which is taken into account and a draw back of the standard mean-variance optimal portfolio framework common in the financial industry.

For all indices we calculate the return of the market,  $i$ , by the continuously compounded return. This is commonplace in financial economics and more appropriate

than measuring cumulative returns. The return is the natural log return of the price index at time,  $t$ , such that  $\Delta p_{i,t}$  denotes the rate of change of  $p_{i,t}$ :

$$\Delta p_{it} = \ln\left(\frac{p_{i,t}}{p_{i,t-1}}\right) \times 100. \quad (1)$$

In exhibit 3 below we provide an overview of the data used. Exhibit 4 shows the summary statistics for the full period and a 20 year sub-period for comparison. Using at least a 20 year period means that we include the boom and bust in the art market during the 1990's. Since the risk free rate over the period has averaged 6% the average excess returns for a number of the emotional asset sectors are negative. We compute excess returns over the risk free rate (*state what risk free rate we use*) for the 20 year period. We then construct annual returns using the monthly data, which as observed in Exhibit 3 have rather low standard deviations.

### **Insert Exhibit 3**

*The construction of the data has been smoothed so that the true underlying volatility in the data is almost certainly much higher. Intuitively and economically this is also the case. One way to observe this true underlying volatility is by taking annual periods and taking the standard deviation of these overlapping series. We also find this to exhibit much less autocorrelation, and hence suffer much less from appearing too smooth. Large positive excess returns were seen in the market for wine, art, and books, which at first glance would indicate an interesting avenue for investing.*

Volatility increases dramatically through the construction of the annual data series. The figures for annual volatility are therefore much more likely to reflect the true amount of risk in the market, rather than taking the monthly figures and multiplying by

the square root of the time horizon, which is common in finance. An alternative approach which is commonly used is to desmooth the data to find the true underlying monthly volatility. In this paper we would like to focus on investing into emotional assets over the long term then we are interested in rebalancing our emotional asset portfolio on an annual basis, and hence we use the annual returns, and the subsequently higher measures for annual volatility, which do not suffer from the high degree of autocorrelation, which would require desmoothing, as the monthly data are.

The high volatility for art on an annual basis is driven in particular by the recent boom in the market. This is highlighted in exhibit 4 where the various emotional assets are graphed. The boom in the art market that occurred in the 1990's is well documented, and thought to be driven by the large demand for impressionist paintings by the Japanese and the occurrence of a tax advantage from buying artworks for Japanese companies.

In exhibit 5 we provide the risk returns trade-off for the various asset classes.

#### **Insert Exhibit 5**

Exhibit 6 provides the 20 year sample correlation using the excess return data for the series. Some collectables show high correlation with each other, such as clocks and watches, books, and atlases. Whereas there is a larger differentiation in price movements between the emotional asset classes, art, wine.

#### **Insert Exhibit 6**

We see strikingly low correlation coefficients between the emotional assets and the traditional asset classes, stocks and bonds. This would indicate that an optimal portfolio could include a sub-set of the emotional assets. Obviously sub-periods would

shall provide alternative return, risk and correlation measures, and a different optimal portfolio allocation.

#### **IV. Performance Evaluation**

To test whether adding new assets to a set of benchmark assets is significantly different from zero we adopt the mean-variance spanning test by de Roon et al (2008). They test whether the increase in Sharpe ratios is significantly different from zero when a new asset is added to their benchmark assets (set of country portfolios in their case).

Suppose we have a set of  $k$  benchmark (excess country returns,  $r_t^x$ , to which we can add  $N$  asset returns,  $r_t^n$ . The optimal Sharpe ratio of the portfolio is estimated using equation (1) from de Roon et al. (2008). A Wald test statistic is used to test for the difference between the Sharpe ratio from excluding and including the asset. In essence we compare the Sharpe ratios of two optimal or efficient portfolios and test their significance statistically.

Using the mean-variance spanning tests outlined in section IV for the individual emotional assets into a standard stock and bond portfolio in exhibit 7 we find a number of extremely interesting results. Firstly we see that the addition of stocks to a bond portfolio is significant with a t-test of  $4.16^3$ . This represents a statistically significant difference between  $\beta_1$  and  $\beta_2$  in exhibit 5. Adding the emotional asset classes we find that the optimal tangency portfolio of the emotional asset classes historically would allocate 82% in wine, 15% in art and 4% in books to find the most optimal portfolio of emotional assets, denoted by the Emotional Assets (EA) in exhibit 5. Using the performance test to

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<sup>3</sup> Due to the low number of annual observations we bootstrap the t-tests.

test the difference in the Sharpe ratios between the stock and bond portfolio, and the stock, bond and the tangency portfolio of emotional asset classes, is also statistically significant with a t-value of 5.99<sup>4</sup>. Although short selling also provides statistically significant results we exclude this from the analysis due to the impracticality of being able to short such heterogeneous assets. Finally we find that the conditioned portfolio of emotional assets using the allocation of x%, y% and z% in to art, wine and books respectively, as in the case of Merrill Lynch we find that.....

See exhibit 7 for the t-tests for testing the degree of significance for the inclusion of the various emotional assets.

*In exhibit 9 we take a further step and focus on the portfolio allocation which is similar in vain to the observed portfolio into the luxury goods market as observed by the Merrill Lynch/ Cap Gemini report from exhibit 1. Taking the following breakdown into the luxury goods sector: 20% Art, 18% Clocks and Watches, and 4 % into Wine, Stamps, Atlases and Books respectively, which represents 52% of the total investment into luxury goods, we constrain the portfolio to include a 39.5% stake in art, a 35% allocation into clocks and watches, and a 6.7% allocation into Wine, Stamps, Atlases and Books. The spanning test results in a highly significant t-stat for the incision of this emotional asset allocation. See exhibit 9.*

This study is a first to include emotional assets into the asset portfolio using annual time horizon. Using advances in evaluating portfolio optimization through the

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<sup>4</sup> Also the inclusion of this tangency emotional asset portfolio with either stocks or bonds as stand alone asset classes is also significant,  $\beta_3$  is statistically different from  $\beta_1$  and  $\beta_2$ . If an asset is added to an additional asset in the portfolio we use a simple t-test for statistical significance, otherwise if an asset is added to a portfolio of 2 or more assets we use a mean-variance spanning test.

development of mean-variance spanning tests we have gained some exciting new insight into the positive nature in which an allocation into either a particular emotional asset, *such as wine or books, which show the most attractive features, for a single allocation into an emotional asset* or a more diverse portfolio of emotional assets to provide the investor with a positive and highly significant increase in the Sharpe ratio, which measures the risk-return profile of the investment portfolio.

We also provide the results by showing the Modigliani & Modigliani (1997)  $M^2$  measure in exhibit 9.

There are of course a number of limiting factors which need to be mentioned and are the basis for further research. Firstly the degree to which risk in these particular asset classes is captured by the use of volatility alone. It is likely that the highly volatile nature of this market, the low level of liquidity, at times, may lead to the existence of non-normality in the data, and the importance of downside risk and more extreme events, captured as fat tailed empirical return distributions. Secondly the degree with which the data is smoothing is essential. The correct amount of autocorrelation in the series could need to be accounted for. We have conducted some robustness test to this and find a significant results for spanning once this desmoothing, or unsmoothing process is accounted for. Naturally a third point is the wider choice of investment portfolio; including for example more traditional alternative investments classes such as Private equity, hedge funds, real-estate, and commodities.

From a practical point of view before advocating any investment into the emotional asset class arena we would suggest that a comprehensive study of the size of

the market is undertaken for each alternative emotional asset class. This is not likely to be a mainstream investment vehicle, but a more boutique vehicle for HNWI's by nature.

Moreover, we would advise only a small allocation of any investment portfolio to be held in emotional assets, which at first sight may appear sub-optimal, but given the risk of the unknown, with greater risk looming in these types of markets, then we would take a more conservative approach. Furthermore we have assumed a conservative approach to the investment strategy taking average annual returns. Fund managers in this industry are aware of dynamic trading strategies and market inefficiencies which are likely to provide returns in excess of those generated by this study.

## **V. Conclusions**

Using a number of broad indices for a variety of emotional asset classes, we have seen how these emotional assets prices have increased over the past 20 years. The emotional assets, art, wine, stamps, atlases and books show positive excess return over the period.

Some collectable items show a tendency to move in line with each other, with a high correlation coefficient, such as books and atlases, and clocks and watches and stamps. However there is significant divergence in the behaviour of the various price indices to enable an investor to benefit from holding a diversified portfolio of these emotional assets. The real benefits occur from minimizing risk whilst maximising return strategy when a portfolio of stocks and bonds is held in combination with wine, art and books. We also see that the broad portfolio of a variety of emotional assets provides a significantly

significant contribution to the mean-variance portfolio, with a significant increase in the Sharpe ratio. It would appear that using the raw data, that an allocation into emotional assets is certainly interesting to investors.

Since investors typically tend to hold more art than wine or books, it would appear that investors are willing to give up some risk adjusted returns in favour of some emotional value. The consumption value is therefore also important to take into account when looking at direct investments into these types of assets. When investing in an indirect manner, through the raising number of funds which offer collectibles and emotional assets to investors then a small allocation into the emotional asset space could contribute significantly to a diversified investment portfolio. Preliminary analysis into the behaviour of emotional assets over the business cycle show that the diversification benefits which arise from investing into real assets of an emotional nature may provide an alternative means for portfolio diversification than previously has been suggested.

## **VI. References**

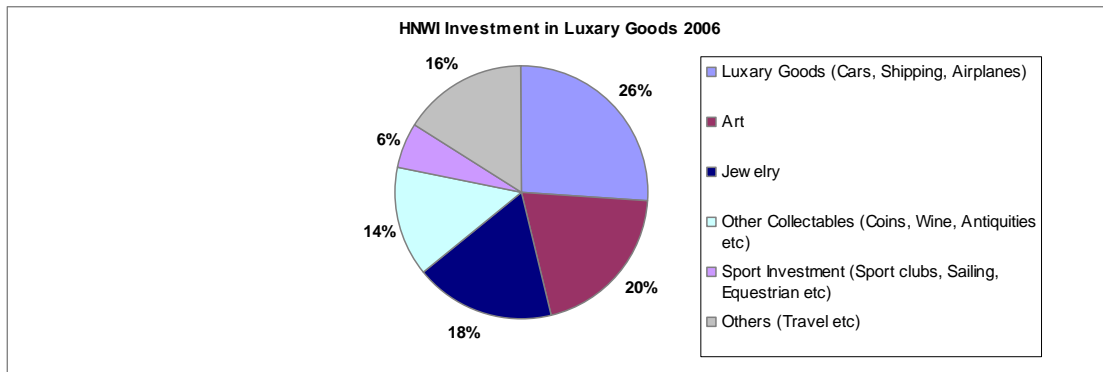
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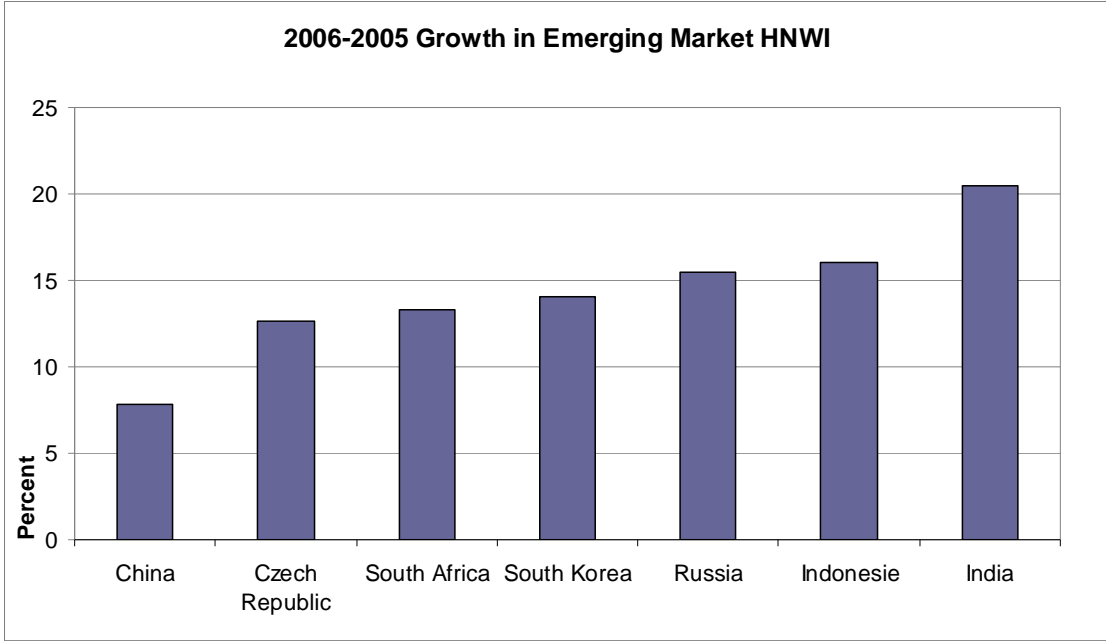
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## Exhibit 1



Source: Merrill Lynch/CapGemini, World Wealth Report 2007

**Exhibit 2**



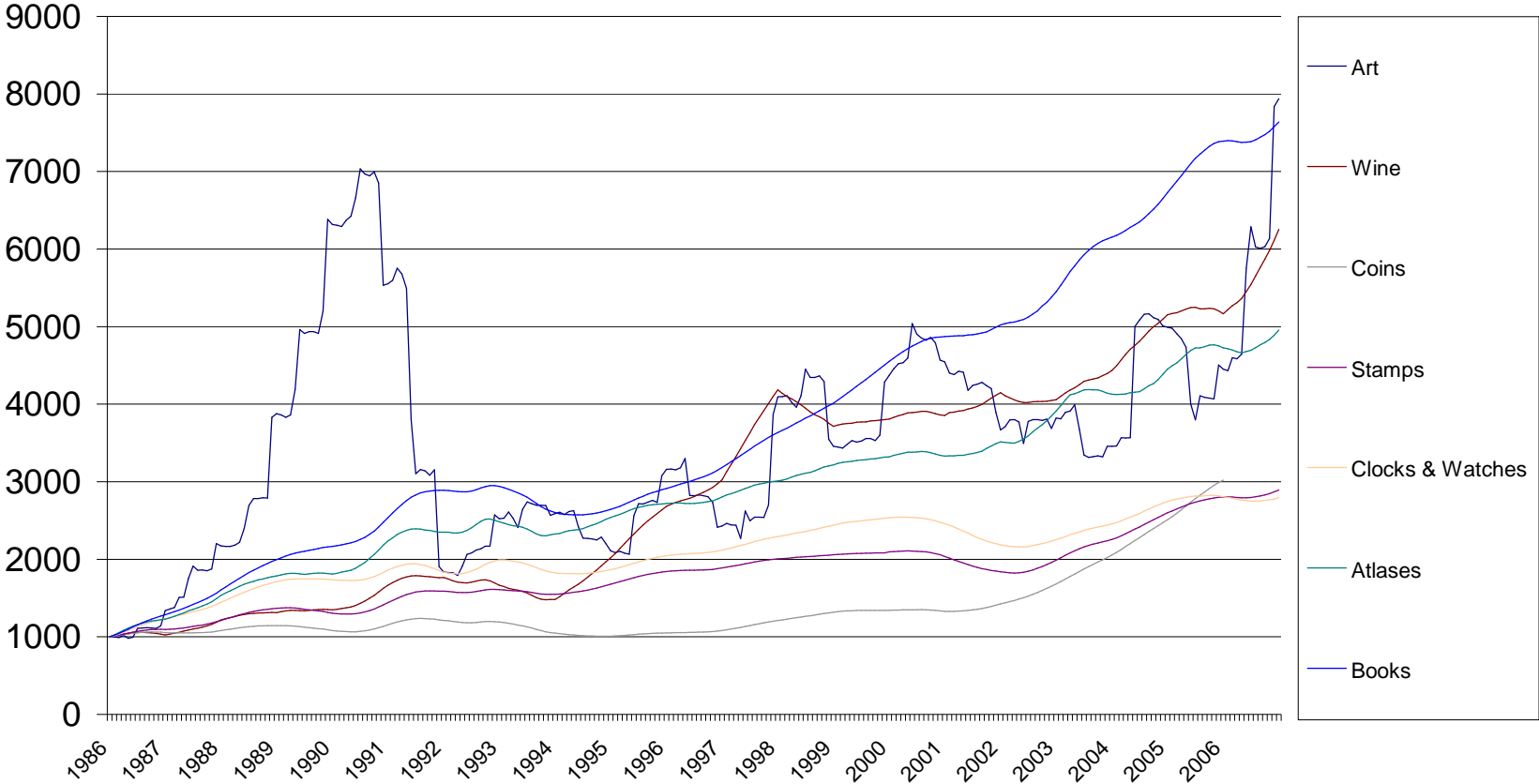
Source: Merrill Lynch/CapGemini, World Wealth Report 2007

### Exhibit 3 Summary Statistics

	Stocks	Bonds	Art	Wine	Stamps	Clocks & Watches	Atlases	Books
<b>1986-12/2006</b>								
<b>Annual Av Excess Returns</b>	5.9%	2.7%	7.6%	6.1%	1.4%	-1.0%	0.2%	2.8%
<b>Annual St Dev</b>	16.6%	10.8%	33.8%	13.5%	16.1%	11.6%	11.7%	11.5%
<b>Average</b>								
<b>St Dev</b>								
<b>Skew</b>								
<b>Kurt</b>								

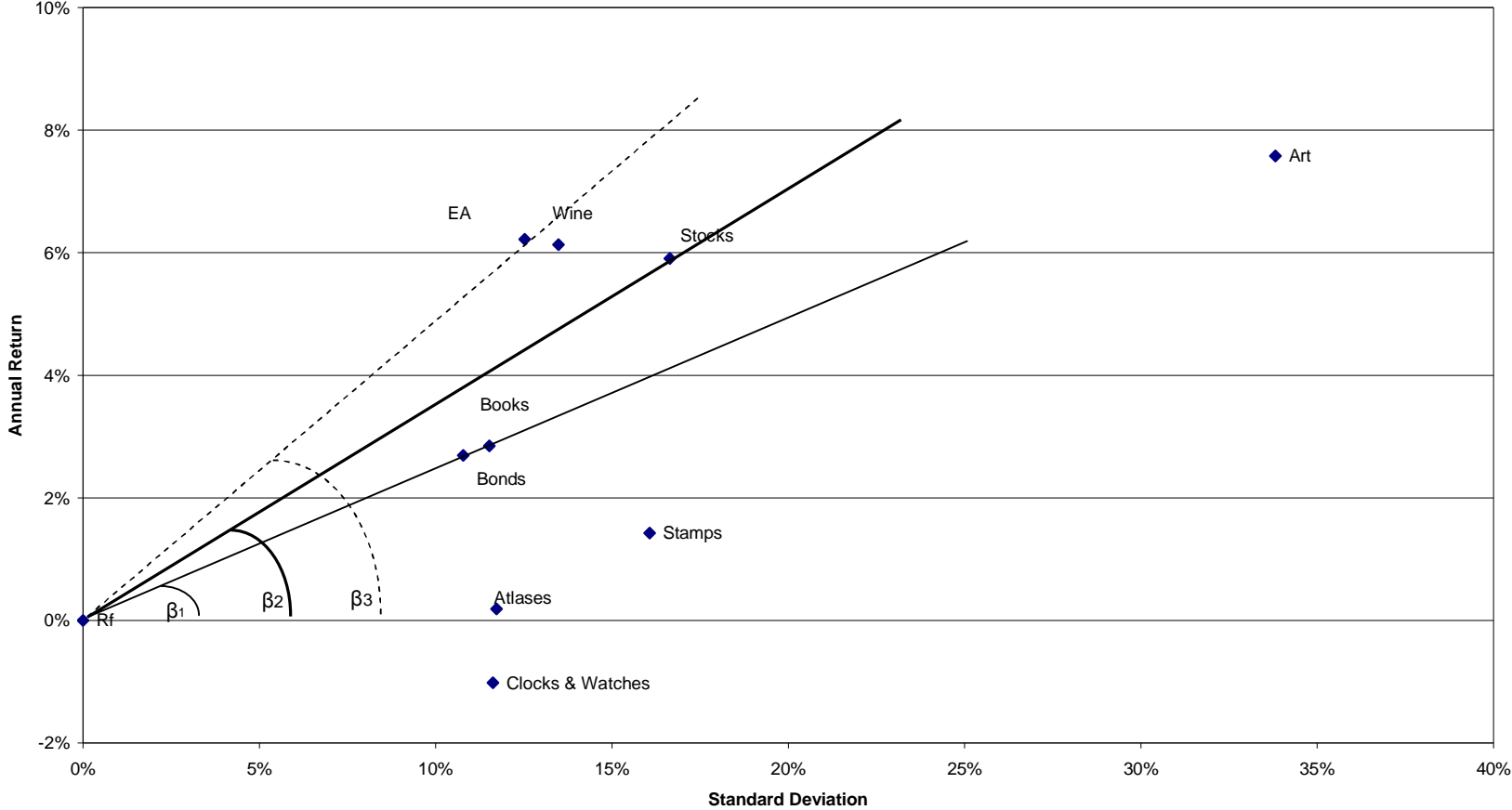
**Exhibit 4**  
**20 Year Performance Indices**

**Emotional Assets**  
**1996-2006**



**Exhibit 5**  
**Annual Real Risk & Return Trade Off**

**Risk vs. Annual Return**



**Exhibit 6**  
**Correlation Indices**  
**1986-2006**

**Monthly Data**

	<b>Stocks</b>	<b>Bonds</b>	<b>Art</b>	<b>Wine</b>	<b>Stamps</b>	<b>Clocks &amp; Watches</b>	<b>Atlases</b>	<b>Books</b>
<b>Stocks</b>	1.000							
<b>Bonds</b>	-0.080	1.000						
<b>Art</b>	-0.010	0.003	1.000					
<b>Wine</b>	0.040	-0.002	-0.001	1.000				
<b>Stamps</b>	-0.022	-0.069	-0.015	0.337	1.000			
<b>Clocks &amp; Watches</b>	-0.080	0.029	0.014	0.389	0.420	1.000		
<b>Atlases</b>	-0.068	-0.035	-0.033	0.608	0.423	0.599	1.000	
<b>Books</b>	-0.040	-0.003	-0.052	0.520	0.396	0.548	0.721	1.000

**Annual Data**

	<b>Stocks</b>	<b>Bonds</b>	<b>Art</b>	<b>Wine</b>	<b>Stamps</b>	<b>Clocks &amp; Watches</b>	<b>Atlases</b>	<b>Books</b>
<b>Stocks</b>	1.000							
<b>Bonds</b>	0.223	1.000						
<b>Art</b>	0.126	-0.160	1.000					
<b>Wine</b>	0.128	-0.243	0.053	1.000				
<b>Stamps</b>	-0.010	-0.422	0.120	0.603	1.000			
<b>Clocks &amp; Watches</b>	0.161	-0.282	0.376	0.484	0.810	1.000		
<b>Atlases</b>	0.023	-0.109	0.195	0.465	0.684	0.820	1.000	
<b>Books</b>	0.138	-0.211	0.308	0.426	0.674	0.866	0.916	1.000

## Exhibit 7 Update

### Mean-Variance Spanning – Individual Emotional Assets

#### A. No Short Selling Constraints

	Portfolio							t-stat	Sharpe
	Stocks	Bonds							
	0.39	0.61							0.485
Art	0.37	0.57	0.07					0.33	0.500
Wine	0.06	0.14		0.80				3.50	1.349
Stamps	0.26	0.43			0.31			0.35	0.502
Clocks & Watches	-0.30	-0.35				1.65		1.47	0.718
Atlases	0.73	1.10					-0.82	0.30	0.497
Books	0.09	0.19					0.72	1.64	0.763

#### B. Short Selling Constraints

	Portfolio							t-stat	Sharpe
	Stocks	Bonds							
	0.39	0.61						0.00	0.485
Art	0.37	0.57	0.07					0.33	0.500
Wine	0.06	0.14		0.80				3.50	1.349
Stamps	0.26	0.43			0.31			0.35	0.502
Clocks & Watches	0.39	0.61				0.00		0.00	0.485
Atlases	0.39	0.61					0.00	0.00	0.485
Books	0.09	0.19					0.72	1.64	0.763

## Exhibit 8 Update

### Mean-Variance Spanning – Optimal Portfolio of Emotional Assets

#### A. No Short Selling Constraints

Portfolio									t-stat	Sharpe
Stocks	Bonds	Art	Wine	Stamps	Clocks & Watches	Atlases	Books			
0.39	0.61									0.14
0.04	0.22	0.04	1.51	0.70	-4.22	-3.10	5.82	<b>8.51</b>		0.89

#### B. Short Selling Constraints

Portfolio									t-stat	Sharpe
Stocks	Bonds	Art	Wine	Stamps	Clocks & Watches	Atlases	Books			
0.39	0.61									0.14
0.05	0.14	0.00	0.76	0.00	0.00	0.00	0.04	3.50		0.39

## Exhibit 8

### Mean-Variance Spanning – Merrill Lynch Portfolio of Emotional Assets

#### A. No Short Selling Constraints

	Stocks	Bonds	Art	Wine	Stamps	Clocks & Watches	Atlases	Books	t-stat	Sharpe
Merrill Lynch			0.39	0.07	0.07	0.35	0.07	0.07		0.03
			0.05	2.13	0.85	-5.92	-4.29	8.17	<b>8.46</b>	0.88

#### B. Short Selling Constraints

	Stocks	Bonds	Art	Wine	Stamps	Clocks & Watches	Atlases	Books	t-stat	Sharpe
Merrill Lynch			0.39	0.07	0.07	0.35	0.07	0.07		0.03
			0.01	0.95	0.00	0.00	0.00	0.04	3.49	0.36

**Exhibit 9**  
**M2 Evaluation**

	<b>Stocks</b>	<b>Bonds</b>	Art	<b>Wine</b>	<b>Stamps</b>	<b>Clocks &amp; Watches</b>	<b>Atlases</b>	<b>Books</b>	<b>Benchmark</b>
Sharpe Ratio	0,17	-0,03	<b>0,14</b>	<b>0,23</b>	-0,10	-0,35	-0,24	-0,01	0.14
M squared	5,91%	2,52%	5,25%	<b>6,87%</b>	1,37%	-2,75%	-0,99%	2,78%	0.89

## Appendix – Index Constituents

### Art Index

Pierre ALECHINSKY,  
Helen ALLINGHAM,  
Sir Lawrence ALMA-TADEMA,  
Michael ANCHER, Karel APPEL,  
Georg BASELITZ,  
Jean Michel BASQUIAT,  
Albert BIERSTADT,  
Pierre BONNARD,  
Fernando BOTERO,  
Francois BOUCHER,  
Eugene BOUDIN,  
Arthur Merric Bloomfield BOYD,  
Georges BRAQUE,  
Bernard BUFFET,  
Sir Edward Coley BURNE-JONES,  
CANALETTO,  
Marc CHAGALL,  
Sandro CHIA,  
Giorgio de CHIRICO,  
Pieter CLAESZ,  
Jean Baptiste Camille COROT,  
Gustave COURBET,  
Salvador DALI,  
Montague DAWSON,  
Otto DIX,  
Jean DUBUFFET,  
Max ERNST,  
Henri FANTIN-LATOURE,  
Lyonel FEININGER,  
Lucio FONTANA,  
Myles Birket FOSTER,  
Jean Honore FRAGONARD,  
Sam FRANCIS,  
Thomas GAINSBOROUGH,  
John William GODWARD,  
Jan van GOYEN,  
Jean-Baptiste GREUZE,  
Atkinson GRIMSHAW,  
Francesco GUARDI,  
Keith HARING,  
Henri HARPIGNIES,  
Childe HASSAM,

Paul-Cesar HELLEU,  
John Frederick (snr) HERRING,  
Ferdinand HODLER,  
Antonio JACOBSEN,  
Johan-Laurents JENSEN,  
Johan Barthold JONGKIND,  
Asger JORN,  
Jan van KESSEL,  
Ernst Ludwig KIRCHNER,  
Moise KISLING,  
Paul KLEE,  
Gustav KLIMT,  
Willem KOEKKOEK,  
Oskar KOKOSCHKA,  
Willem de KOONING,  
Nicolas de LARGILLIERE,  
Carl LARSSON,  
Marie LAURENCIN,  
Fernand LEGER,  
Lord Frederic LEIGHTON,  
Sir Peter LELY,  
Bruno LILJEFORS,  
Nicolaes MAES,  
Rene MAGRITTE,  
Michele MARIESCHI,  
Ben MARSHALL,  
Henri MATISSE,  
Sir John Everett MILLAIS,  
Joan MIRO,  
Claude MONET,  
Giorgio MORANDI,  
Sir Alfred MUNNINGS,  
Emil NOLDE,  
A R PENCK,  
Pablo PICASSO,  
Serge POLIAKOFF,  
Pierre Auguste RENOIR,  
Sir Joshua REYNOLDS,  
Jean-Paul RIOPELLE,  
Diego RIVERA,  
Hubert ROBERT,  
Dante Gabriel ROSSETTI,

Salomon van RUYSDAEL,  
Gino SEVERINI,  
Dorothea SHARP,  
Leon SPILLIAERT,  
Carl SPITZWEG,  
Alfred STEVENS,  
Marcus STONE,  
Abraham STORCK,  
Antonio TAPIES,  
David (younger) TENIERS,  
Fritz THAULOW,  
Archibald THORBURN,  
Giovanni Battista TIEPOLO,  
James Jacques Joseph TISSOT,  
Maurice UTRILLO,  
Louis VALTAT,  
Edouard VUILLARD,  
Andy WARHOL,  
Tom WESSELMANN,  
Jack Butler YEATS,  
Anders ZORN.

## **Atlases**

Speed, John: Theatre of the Empire of Great Britain with the Prospect. London. 1676. Five Parts in one Volume. Folio. Maps uncoloured; Ogilby, John: Britannia. London. 1675. Folio. First Edition, maps uncoloured; De Wit, Frederick: Atlas. Amsterdam. 1680. Folio. 106 maps; Thomson, John: A new General Atlas. Edinburgh. 1817. Folio; Carey, H.C. and Lea, I: A complete Historical, Chronological and Geographical American Atlas. Philadelphia. 1823. Folio; Blaeu, Willem and Jan: Nouveau Theatre d'Italie. The Hague. 1724. 4 vols. Folio. maps uncoloured; Cary, John: New and Correct English Atlas. London. ed.1878. 4to; Ortelius, Abraham: Theatrum Orbis Terrarum. Antwerp. 1570. Folio; Martin, R.M: Tallis's Illustrated Atlas. London. 1851. 4to; Moule, Thomas: English Countries Delineated. London. 1837. 4to.

## **Vintage Clocks & Watches**

### **Carriage Clocks**

1. A silver travelling timepiece. French and English hallmarked, London 1902.
2. A porcelain mounted engraved gilt-brass repeating carriage clock. Drocourt, French, circa 1885.
3. A fine English gilt-bronze repeating carriage clock with mahogany travelling case. James McCabe No.2873, London, circa 1850.
4. A gilt-brass strut timepiece No. 963. Attributed to Thomas Cole, London, circa 1852.
5. A grande-sonnerie gorge cased carriage clock. Henri Jacot No.10009, French, circa 1890.

### **Long-Case Clocks**

1. A fine walnut longcase clock, George Graham No.747, George II, circa 1740.
2. A mahogany longcase clock, Marmaduke Storr, London, circa 1770.
3. A walnut marquetry longcase clock, Henry Aske, London, circa 1695.
4. A good Victorian mahogany longcase regulator, J.Condliff, Liverpool for Bunyan, Manchester, circa 1850.
5. A fine mulberrywood month going longcase clock, Thomas Tompion No.266, William III, circa 1695.
6. A George III mahogany longcase clock, Stanyer, Nantwich, circa 1785.
7. A fine month going walnut longcase clock, Daniel Quare & Steven Horseman No.234, London, circa 1720.
8. A George III fine mahogany longcase clock, Thomas Mudge & William Dutton, London, circa 1775.
9. An Edwardian mahogany quarter chiming longcase clock, English, circa 1905.
10. A George III japanned longcase clock, William Beavis, London, circa 1745.

### **Marine Chronometers**

1. An English burr walnut eight-day mantel chronometer, Thomas Mercer No.598, circa 1930.
2. A rare early two-day marine chronometer. Johan Arnold No.16, circa 1791.
3. A two-day marine chronometer. Morris Tobias No.560, circa 1830.
4. An eight-day marine chronometer. M.F. Dent No.28489.
5. A rare early small one-day marine chronometer with 'quick train'. Thomas Earnshaw No.947, London, circa 1805/1810.
6. A mahogany small two-day chronometer. Parkinson & Frodsham No.537, London, mid-19th century.
7. A two-day marine chronometer. Arnold & Dent No.1012.
8. A marine chronometer. R. & H. Molyneux No.1834.
9. A two-day marine chronometer. Victor Kullberg No.8994, circa 1915.
10. A two-day marine chronometer with Guillaume's integral compensated balance. Lange & Söhne, Glashutte No.5853, circa 1945.

### **Pocket-Watches - 17th & 18th Centuries**

1. Silver-gilt bird-form watch, C. Cameel, circa 1630.
2. Charles Bobinet. A rare enamel pair cased verge watch, 1st half of the 17th Century.

3. A fine and rare enamel, gilt-metal and oxidised steel verge watch, Paul Bizot, circa 1665.
4. A gold early verge miniature watch with engraved case, German, circa 1650.
5. A very fine gold, enamel painted and shagreen pair cased verge watch, Baccuet, late 17th Century.
6. An unusually enamelled gold quarter repeating cylinder watch, Conyers Dunlop No.3659, London, circa 1780.
7. A gold and enamel verge watch, Jonas Crossley No.9186, Manchester, 1796.
8. A gold, lapis lazuli, mother-of-pearl and agate half quarter repeating pair cased watch, Renpuarg No.4, London, circa 1710.
9. A gold, enamel, pearl and diamond oval watch with expanding hands and flying quarter seconds, William Anthony No.1706, London, circa 1800.
10. A repoussé gold pair cased verge watch, Robert Higgs No.861, London, 1725.

### **Pocket-Watches - 19th & 20th Centuries**

1. A fine gold ruby cylinder "Souscription" watch, Breguet et Fils No.4461, circa 1830.
2. A gold pair cased pocket chronometer, Thomas Earnshaw No.582, 1801.
3. A fine rare English lever watch, Thomas Cummins No.14=26, London, hallmarked 1825.
4. A fine rare gold montre a tact, Hunt & Roskell No.10413
5. A fine gold hunter cased minute repeating keyless lever watch, Charles Frodsham No.08858, London, 1900.
6. The Henry Graves Supercomplication; Patek Philippe & Co., Geneve, No.198385, started in 1928, completed in 1932 and delivered on January 19, 1933.
7. A heavy gold hunting cased keyless lever perpetual calendar watch, Charles Frodsham No.05521, 1877.
8. A platinum and diamond set keyless lever watch, Cartier No.9240.
9. A gold openface watch, A Lange & Söhne, Glashutte bei Dresden No.44259, circa 1905.
10. A gold half hunting cased keyless lever karrusel, English, 1902.

### **Table-Clocks**

1. A George III inlaid satinwood balloon table clock. Wright, London, circa 1800.
2. A brass-inlaid ebonised lancet table clock. Regency, circa 1810.
3. An ebony veneered brass basket top table clock. David Guepin, London, circa 1695.
4. A good ormolu mounted tortoiseshell musical table clock. George Prior, London, circa 1785.
5. A William III ebonised quarter-repeating table clock. Simon De Charmes, London, circa 1695.
6. An ebony veneered and ebonised quarter repeating table clock. Thomas Tompion No.390, Queen Anne, circa 1705.
7. A silver-mounted ebony quarter-repeating bracket clock. George Graham No.630.
8. A mahogany chiming table clock. English, circa 1895.
9. A very rare ormolu mounted ebony grande-sonnerie and quarter repeating table clock. Thomas Tompion No.300, William III, circa 1700.
10. A George III mahogany table clock. Robert Wood, London, circa 1780.

## **Vintage Bordeaux Wine**

Component Châteaux:

Lafite;  
Latour;  
Margaux;  
Mouton-Rothschild;  
Haut Brion;  
Brane-Cantenac;  
Lascombes;  
Léoville-Barton;  
Léoville-Poyferre;  
Léoville Lascases;  
Pichon-Longueville Baron;  
Pichon-Longueville Lalande;  
Rauzan-Gassies;  
Ducru-Beaucaillou;  
Cos d'Estournel; Montrose;  
Gruaud-Larose;  
Rauzan-Ségla;  
Palmer; Giscours;  
La Lagune; Talbot; Beychevelle;  
Lynch Bages; Cantemerle;  
Ausone;  
Cheval Blanc;  
Pétrus.