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Abstract

During 2008, the 30 companies included in the Dow Jones destroyed \$1.6 trillion for their shareholders. Only 2 companies (Wal-Mart and McDonalds) created value. The top shareholder value destroyers were General Electric (\$233 billion) and Microsoft (\$178 billion). The market value of the 30 companies was \$2.9 trillion in 2008 and \$4.4 trillion in 2007.

The price of the shares of each company had a big dispersion: on average, the maximum price of the year 2008 was 2.6 times the minimum price. 2008 had 11 of the 20 days with lowest returns in the period 1963-2008, and 8 of the 20 days with highest returns in the same 45-year period.

The average return of 2008 was -32.3% (6 companies had returns below -50% and 20 below -20%). However, the investors who bought shares in the years 1987-1998 and 2001-2002 had positive returns by December 2008.

JEL Classification: G12, G31, M21

Keywords: shareholder value creation, created shareholder value, shareholder value added, shareholder return.

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Introduction

We quantify shareholder value creation¹ in 2008 and 2007 for the 30 companies in the Dow Jones Industrials. The **created shareholder value** is quantified as follows:

$$\text{Created shareholder value} = \text{Equity market value} \times (\text{Shareholder return} - K_e)$$

A company creates value for the shareholders when the shareholder return exceeds the required return to equity (K_e).

To obtain the created shareholder value, we first define the equity market value of a listed company which is the company's market value (that is, each share's price multiplied by the number of shares). The **increase of equity market value** in one year is the equity market value at the end of that year less the equity market value at the end of the previous year.

The **shareholder return** is the shareholder value added in one year, divided by the equity market value at the beginning of the year. The **required return to equity** (K_e) is the sum of the interest rate of long-term Treasury bonds plus a quantity that is usually called the company's risk premium and which depends on its risk.

Consequently, the created shareholder value is the shareholder value added above shareholders' requirements, which are reflected in the required return to equity (K_e).

Table 1 shows that in 2008 there were 2 value creators (Wal-Mart and McDonalds) and 28 value destroyers. In 2007 there were 16 value creators. The 30 companies destroyed \$1.6 trillion for their shareholders. The top shareholder value destroyers in 2008 were General Electric (\$232.7 billion), Microsoft (\$177.7 billion),² Bank of America (\$132 billion), CitiGroup (\$127 billion) and Exxon (\$106.8 billion).

¹ We define shareholder value created following Fernández (2002, chapter 1), "*Valuation and Shareholder Value Creation*", Academic Press, San Diego, CA.

² Microsoft was the top shareholder value creator in 1994, 1998, 1999, 2001, and 2004, the second shareholder value creator in 1996 and 1997, and the top value destroyer in 2000.

Table 1

Two shareholder value creators and 28 value destroyers in 2008

1	WAL-MART	22.6	9	3M	-23.1	17	IBM	-45.1	25	AT&T	-92.2
2	MCDONALDS	0.3	10	ALCOA	-23.2	18	COCA-COLA	-46.0	26	EXXON MOBIL	-106.8
3	HOME DEPOT	-9.1	11	UNITED TECH.	-28.6	19	HEWLETT-PACKARD	-48.5	27	CITIGROUP	-127.0
4	KRAFT FOODS	-11.5	12	JOHNSON & JOHNSON	-31.1	20	PROCTER & GAMBLE	-49.0	28	BANK OF AMERICA	-132.0
5	GENERAL MOTORS	-13.6	13	VERIZON COMM.	-33.5	21	JP MORGAN CHASE	-49.4	29	MICROSOFT	-177.7
6	DU PONT	-19.3	14	PFIZER	-39.4	22	CHEVRON	-51.3	30	GENERAL ELECTRIC	-232.7
7	CATERPILLAR	-20.5	15	BOEING	-40.5	23	MERCK & CO.	-66.3			
8	WALT DISNEY	-22.8	16	AMERICAN EXPRESS	-44.0	24	INTEL	-83.0			
										Sum	-1,644.7

Table 2 shows that in 2008 only Wal-Mart and McDonalds had positive returns for their shareholders. Six companies had returns below -50% and 20 below -20%. The average return was -32.3%.

Table 2

Shareholder return in 2008 (only Wal-Mart and McDonalds' shareholders had positive returns)

1	WAL-MART	20.0%	9	VERIZON COMM.	-18.0%	17	WALT DISNEY	-28.6%	25	GENERAL ELECTRIC	-54.0%
2	MCDONALDS	8.5%	10	CHEVRON	-18.3%	18	3M	-29.8%	26	BANK OF AMERICA	-63.1%
3	JOHNSON & JOHNSON	-7.8%	11	IBM	-20.8%	19	CATERPILLAR	-36.8%	27	AMERICAN EXPRESS	-63.7%
4	HOME DEPOT	-11.5%	12	COCA-COLA	-24.1%	20	DU PONT	-40.2%	28	ALCOA	-68.3%
5	EXXON MOBIL	-13.1%	13	JP MORGAN CHASE	-25.1%	21	INTEL	-43.5%	29	CITIGROUP	-76.0%
6	PROCTER & GAMBLE	-13.8%	14	HEWLETT-PACKARD	-27.6%	22	MICROSOFT	-44.4%	30	GENERAL MOTORS	-86.9%
7	KRAFT FOODS	-14.6%	15	AT&T	-28.0%	23	MERCK & CO.	-45.3%		Average	-32.3%
8	PFIZER	-16.9%	16	UNITED TECH.	-28.5%	24	BOEING	-50.0%		Weighted average	-29.2%

Table 3 shows for each of the 30 companies in the Dow Jones:

- The equity market value (or market capitalization) in 2006, 2007 and 2008 (columns 1, 2 and 3).
- The shareholder return in 2007 and 2008 (columns 4 and 5).
- The created shareholder value in 2007 and 2008 (columns 6 and 7).
- The maximum share price of the year divided by the minimum price in 2007 and 2008 (columns 8 and 9).

The companies are ordered by decreasing Market Capitalization in 2008.

Table 3

Companies in the Dow Jones. Market capitalization, Shareholder return, created shareholder value and price variation in 2007 and 2008

Column number	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Market cap. (\$ billion)			Shareholder return		Created shareholder value (\$ billion)		Share price max./min.	
	2006	2007	2008	2007	2008	2007	2008	2007	2008
EXXON MOBIL	447	512	406	24.3%	-13.1%	73.0	-106.8	1.36	1.52
WAL-MART	192	190	220	4.9%	20.0%	-6.8	22.6	1.21	1.38
PROCTER & GAMBLE	204	226	185	16.6%	-13.8%	17.1	-49.0	1.22	1.28
MICROSOFT	294	333	173	20.8%	-44.4%	34.1	-177.7	1.39	2.03
AT&T	223	252	168	20.6%	-28.0%	26.2	-92.2	1.27	1.85
JOHNSON & JOHNSON	191	191	166	3.6%	-7.8%	-10.0	-31.1	1.14	1.31
GENERAL ELECTRIC	384	375	161	2.7%	-54.0%	-22.0	-232.7	1.24	2.99
CHEVRON	160	197	150	30.6%	-18.3%	36.1	-51.3	1.43	1.78
PFIZER	187	155	119	-8.1%	-16.9%	-31.7	-39.4	1.24	1.67
JP MORGAN CHASE	168	147	118	-6.9%	-25.1%	-26.3	-49.4	1.31	2.19
IBM	146	150	113	12.8%	-20.8%	4.7	-45.1	1.32	1.81
COCA-COLA	113	142	105	30.4%	-24.1%	24.7	-46.0	1.40	1.60
VERIZON COMM.	109	126	96	22.2%	-18.0%	14.5	-33.5	1.29	1.73
HEWLETT-PACKARD	112	130	88	23.4%	-27.6%	15.0	-48.5	1.38	1.72
INTEL	117	156	82	34.2%	-43.5%	28.3	-83.0	1.48	2.18
BANK OF AMERICA	240	183	71	-18.9%	-63.1%	-67.3	-132.0	1.32	4.00
MCDONALDS	55	70	69	36.4%	8.5%	15.3	0.3	1.47	1.30
MERCK & CO.	95	123	64	37.4%	-45.3%	27.0	-66.3	1.42	2.57
UNITED TECH.	63	76	51	24.5%	-28.5%	9.3	-28.6	1.31	1.77
WALT DISNEY	71	61	42	-3.5%	-28.6%	-8.7	-22.8	1.15	1.87
3M	57	60	40	10.7%	-29.8%	1.1	-23.1	1.31	1.58
KRAFT FOODS	17	50	39	-5.7%	-14.6%	-2.3	-11.5	1.22	1.41
HOME DEPOT	82	45	39	-31.1%	-11.5%	-32.7	-9.1	1.61	1.66
CITIGROUP	274	147	37	-44.7%	-76.0%	-152.0	-127.0	1.90	7.88
BOEING	70	68	31	-0.1%	-50.0%	-7.1	-40.5	1.26	2.36
CATERPILLAR	40	45	27	20.5%	-36.8%	4.7	-20.5	1.50	2.60
DU PONT	45	40	23	-6.6%	-40.2%	-6.9	-19.3	1.25	2.38
AMERICAN EXPRESS	73	61	22	-13.4%	-63.7%	-16.2	-44.0	1.29	3.02
ALCOA	26	30	9.0	24.1%	-68.3%	4.0	-23.2	1.66	6.51
GENERAL MOTORS	17	14	2.0	-16.4%	-86.9%	-4.6	-13.6	1.71	10.39
Sum	4,270	4,355	2,915			-59.4	-1,644.7		
Average				8.2%	-32.3%			1.37	2.61
Weighted average				7.5%	-29.2%				
Max.				37.4%	20.0%				
Min.				-44.7%	-86.9%				

Source of the raw data: Datastream.

Figure 1 compares the shareholder return in 2007 and 2008. It may be seen that only two companies (Wal-Mart and McDonalds) had positive returns in 2007 and 2008, 11 companies had negative return in both years, and 17 had positive return in 2007 and negative return in 2008.

Figure 1

Relation of the return in 2008 and the return in 2007

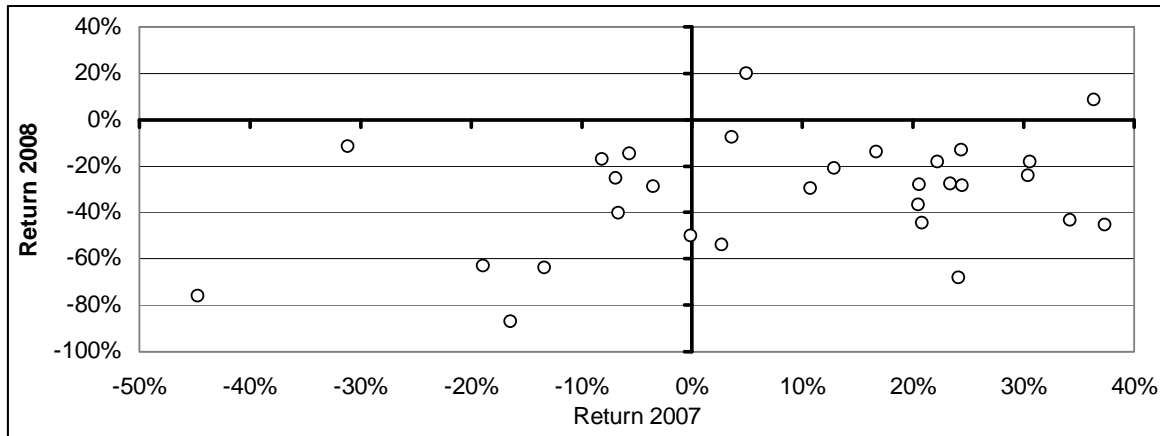


Table 4 contains the maximum share price of the year divided by the minimum price in 2007 and 2008. All companies had a greater dispersion in its share price in 2008 than in 2007, except McDonalds. On average, the maximum price of the year 2008 was 2.6 times the minimum price (in 2007 was 1.4 times).

Table 4

Share price change in 2007 and 2008. Maximum share price in the year/minimum share price in the year

	2007	2008		2007	2008		2007	2008			
1	GENERAL MOTORS	1.7	10.4	12	INTEL	1.5	2.2	23	COCA-COLA	1.4	1.6
2	CITIGROUP	1.9	7.9	13	MICROSOFT	1.4	2.0	24	3M	1.3	1.6
3	ALCOA	1.7	6.5	14	WALT DISNEY	1.2	1.9	25	EXXON MOBIL	1.4	1.5
4	BANK OF AMERICA	1.3	4.0	15	AT&T	1.3	1.9	26	KRAFT FOODS	1.2	1.4
5	AMERICAN EXPRESS	1.3	3.0	16	IBM	1.3	1.8	27	WAL-MART	1.2	1.4
6	GENERAL ELECTRIC	1.2	3.0	17	CHEVRON	1.4	1.8	28	JOHNSON & JOHNSON	1.1	1.3
7	CATERPILLAR	1.5	2.6	18	UNITED TECH.	1.3	1.8	29	MCDONALDS	1.5	1.3
8	MERCK & CO.	1.4	2.6	19	VERIZON COMM.	1.3	1.7	30	PROCTER & GAMBLE	1.2	1.3
9	DU PONT	1.3	2.4	20	HEWLETT-PACKARD	1.4	1.7				
10	BOEING	1.3	2.4	21	PFIZER	1.2	1.7		Average	1.4	2.6
11	JP MORGAN CHASE	1.3	2.2	22	HOME DEPOT	1.6	1.7		Weighted average	1.4	2.2

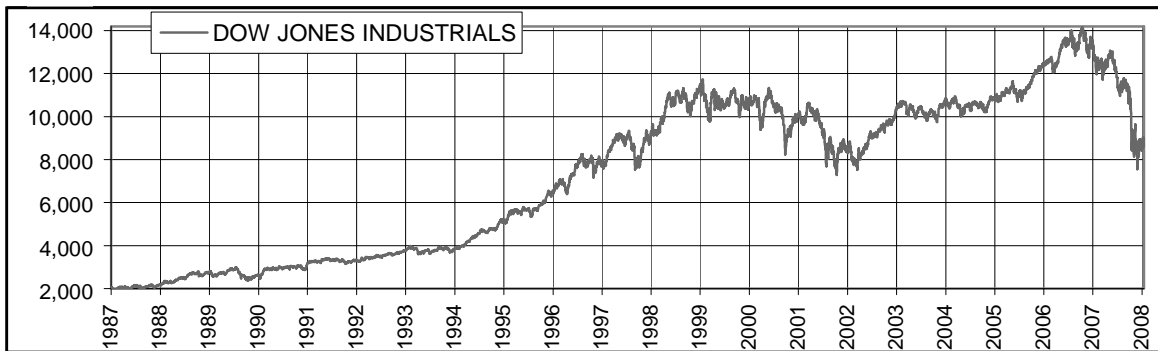
Period 1987-2008

Figure 2 contains the evolution of the Dow Jones from December 1987 (1,938.8 points) to December 2008 (8,776.4 points). Figure 3 contains the daily return of the index and Figure 4 its volatility, which reached its maximum in October, 2008.

Table 5 shows that 2008 had 11 of the 20 days with lowest returns in the period 1963-2008, and 8 of the 20 days with highest returns in the same period. Most of these days were in the months of October and November (9 out of 11 and 7 out of 8).

Figure 2

Evolution of the Dow Jones Index



Source of the raw data: Datastream.

Figure 3

Daily return of the Dow Jones Index

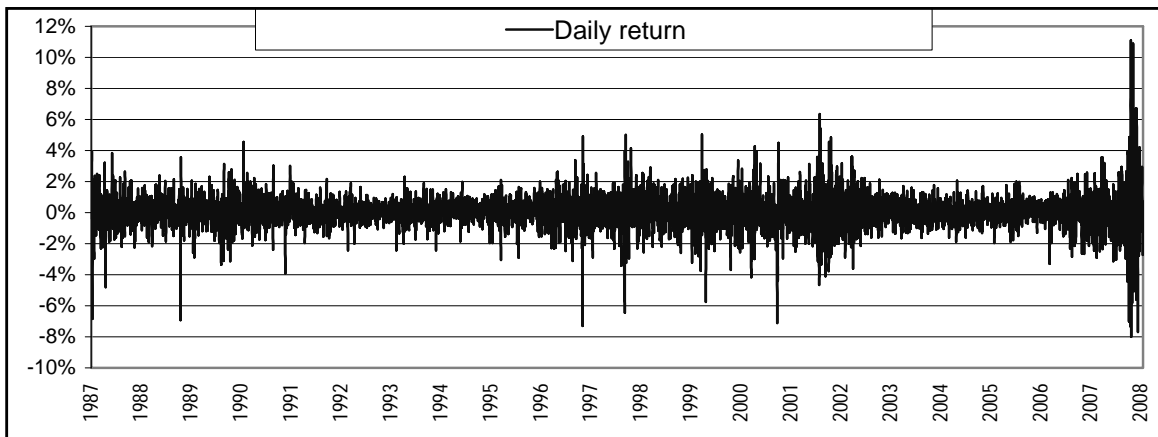


Figure 4

Volatility of the Dow Jones. Annualized volatility. Calculated using daily data of the last 30 days and of the last year

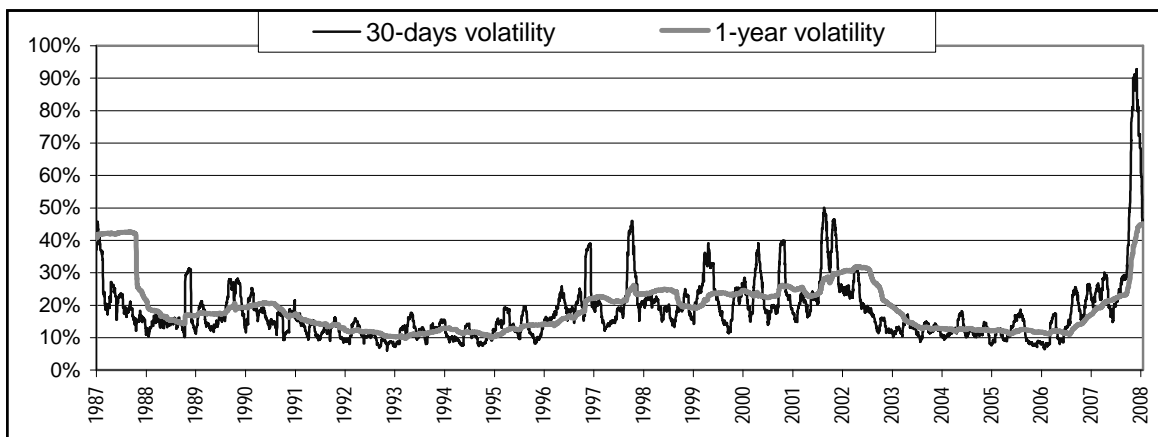


Table 5

Days with highest and lowest daily returns of the Dow Jones Index 1963-2008

19-Oct-87	-22.6%	31-Aug-98	-6.4%	13-Oct-08	11.1%	29-Oct-87	5.0%
26-Oct-87	-8.0%	22-Oct-08	-5.7%	28-Oct-08	10.9%	24-Nov-08	4.9%
15-Oct-08	-7.9%	14-Apr-00	-5.7%	21-Oct-87	10.1%	16-Mar-00	4.9%
1-Dec-08	-7.7%	20-Nov-08	-5.6%	13-Nov-08	6.7%	17-Aug-82	4.9%
9-Oct-08	-7.3%	7-Oct-08	-5.1%	21-Nov-08	6.5%	15-Oct-02	4.8%
27-Oct-97	-7.2%	19-Nov-08	-5.1%	24-Jul-02	6.3%	9-Oct-74	4.7%
17-Sep-01	-7.1%	5-Nov-08	-5.0%	20-Oct-87	5.9%	28-Oct-97	4.7%
29-Sep-08	-7.0%	6-Nov-08	-4.9%	29-Jul-02	5.4%	30-Sep-08	4.7%
13-Oct-89	-6.9%	14-Apr-88	-4.8%	27-May-70	5.1%	16-Oct-08	4.7%
8-Jan-88	-6.9%	12-Nov-08	-4.7%	8-Sep-98	5.0%	20-Oct-08	4.7%

Table 6 shows that, despite the bad return of 2008, the investors who bought shares in the years 1987-1998 and 2001-2002 had a positive return on December 2008. Only those who bought shares in the years 1999-2000 and 2003-2007 had negative returns on December 2008. Table 6 also shows that most holding periods in these 21 years had positive returns.

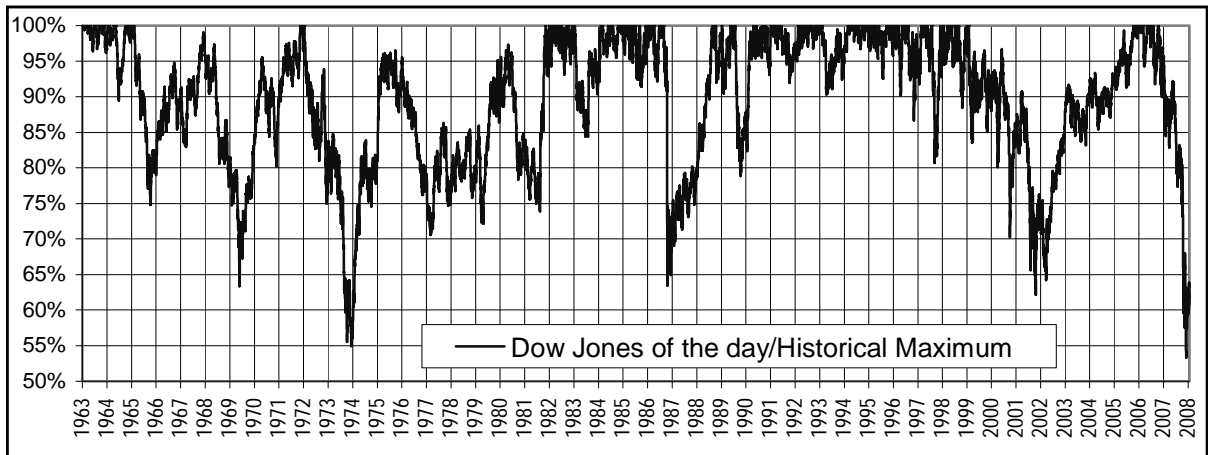
Table 6

Shareholder return of the Dow Jones between 1987 and 2008

		To																					
		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
From	1987	16%	24%	15%	17%	15%	15%	14%	17%	18%	19%	19%	19%	17%	15%	13%	14%	13%	13%	13%	13%	10%	
	1988		32%	14%	18%	15%	15%	14%	17%	18%	19%	19%	19%	17%	15%	13%	14%	13%	13%	13%	13%	9.9%	
	1989			-0.6%	11%	10%	12%	10%	14%	16%	17%	17%	18%	16%	14%	12%	13%	12%	11%	12%	12%	8.8%	
	1990				24%	16%	16%	13%	18%	19%	20%	20%	21%	18%	15%	13%	14%	13%	12%	13%	12%	9.4%	
	1991					7.3%	12%	9.6%	16%	18%	19%	19%	20%	17%	15%	12%	13%	12%	11%	12%	12%	8.6%	
	1992						17%	11%	19%	21%	22%	21%	22%	18%	15%	12%	13%	13%	12%	12%	12%	8.6%	
	1993							5.0%	20%	23%	23%	22%	23%	19%	15%	11%	13%	12%	11%	12%	12%	8.1%	
	1994								37%	33%	30%	27%	27%	21%	17%	12%	14%	13%	12%	13%	12%	8.3%	
	1995									29%	27%	24%	25%	18%	14%	9.2%	11%	11%	9.8%	11%	10%	6.4%	
	1996										25%	21%	23%	16%	11%	6.2%	9.1%	8.6%	7.8%	8.9%	8.9%	4.7%	
	1997											18%	23%	13%	7.8%	2.8%	6.7%	6.5%	5.9%	7.3%	7.4%	3.1%	
	1998												27%	10%	4.6%	-0.7%	4.5%	4.7%	4.2%	6.0%	6.3%	1.7%	
	1999														-4.8%	-5.1%	-8.6%	-0.5%	0.7%	0.8%	3.3%	3.9%	-0.8%
	2000															-5.4%	-10%	1.0%	2.1%	2.0%	4.7%	5.3%	-0.3%
	2001																-15%	4.4%	4.7%	4.0%	6.8%	7.2%	0.4%
	2002																	28%	16%	11%	13%	12%	3.3%
	2003																		5.3%	3.5%	8.4%	8.6%	-1.1%
	2004																			1.7%	10%	9.7%	-2.7%
	2005																				19%	14%	-4.1%
	2006																					8.9%	-14%
	2007																						-32%

Figure 5

Evolution of the Dow Jones Index as % of the historical Maximum, 1963-2008



Source of the raw daily data: Datastream.