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Investing strategies in security markets

March 2009

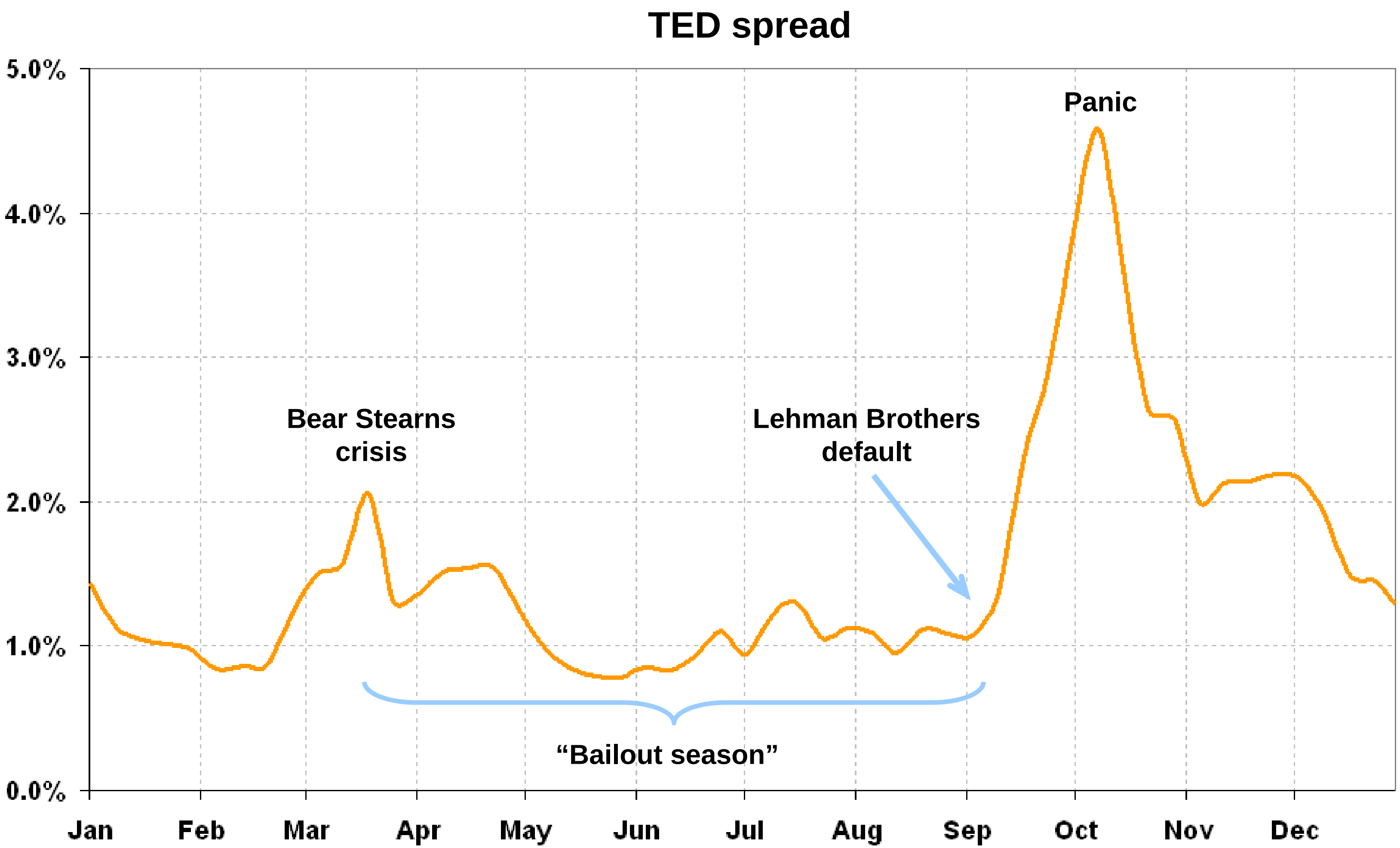
2008: Annus Horriblis for stock markets

The five worst years on the stock markets since 1970

MSCI France (local currency)	Year	2008	2002	1974	1987	1990
	Loss	-43,5%	-34,0%	-33,6%	-29,3%	-25,2%
MSCI Germany (local currency)	Year	2008	2002	1987	1970	1973
	Loss	-45,7%	-44,0%	-39,7%	-26,7%	-22,4%
MSCI UK (local currency)	Year	1974	2008	1973	2002	2001
	Loss	-54,8%	-33,3%	-28,2%	-25,7%	-13,9%
MSCI Italy (local currency)	Year	2008	1987	1974	1990	2001
	Loss	-50,4%	-33,0%	-31,2%	-29,4%	-24,0%
MSCI Spain (local currency)	Year	2008	1976	2002	1977	1990
	Loss	-41,2%	-30,5%	-29,5%	-28,0%	-27,6%
MSCI USA (local currency)	Year	2008	1974	2002	1973	2000
	Loss	-40,9%	-30,9%	-24,0%	-18,7%	-13,6%
MSCI Japan (local currency)	Year	2008	1990	1973	1992	2000
	Loss	-43,9%	-39,9%	-27,4%	-22,2%	-20,3%
MSCI the World Index (USD)	Year	2008	1974	2002	1990	2001
	Loss	-43,3%	-27,8%	-21,1%	-18,7%	-17,8%
MSCI Emerging Markets (USD)	Year	2008	2000	1998	1990	1997
	Loss	-55,2%	-31,8%	-27,5%	-13,8%	-13,4%

Source: FactSet

The financial crisis



Source: FactSet

The **TED spread** is the difference between the interest rates on interbank loans and short term US government debt (T-bill).

The TED spread is an indicator of perceived credit risk of lending to banks, because T-Bills are considered risk free.

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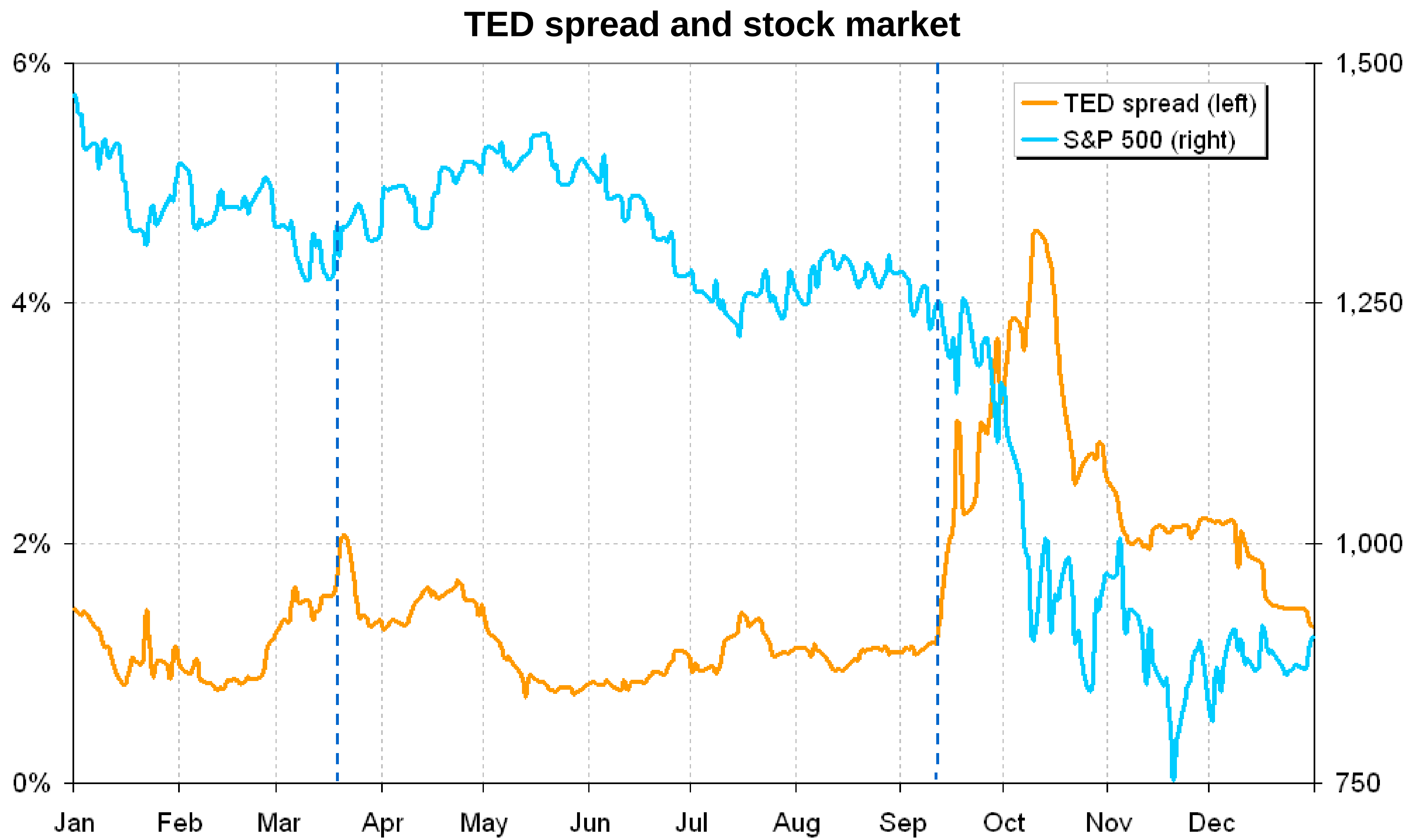
Financial crisis and the stock market



Source: FactSet

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Some times crises bring opportunities

Event	Period	S&P 500 performance	Subsequent 10 years annualized price growth
Recession and oil crisis	1973-1975	-43.4%	9.4%
Recession	1981-1982	-22.4%	14.4%
Wall Street crash	october 1987	-33.5%	16.0%
First gulf war and recession	1990-1991	-20.0%	16.5%
Bankruptcy of LTCM and asian financial crisis	1997-1998	-19.3%	3.0%
Speculative bubble and recession	2000-2002	-49.1%	NA

Source: FactSet

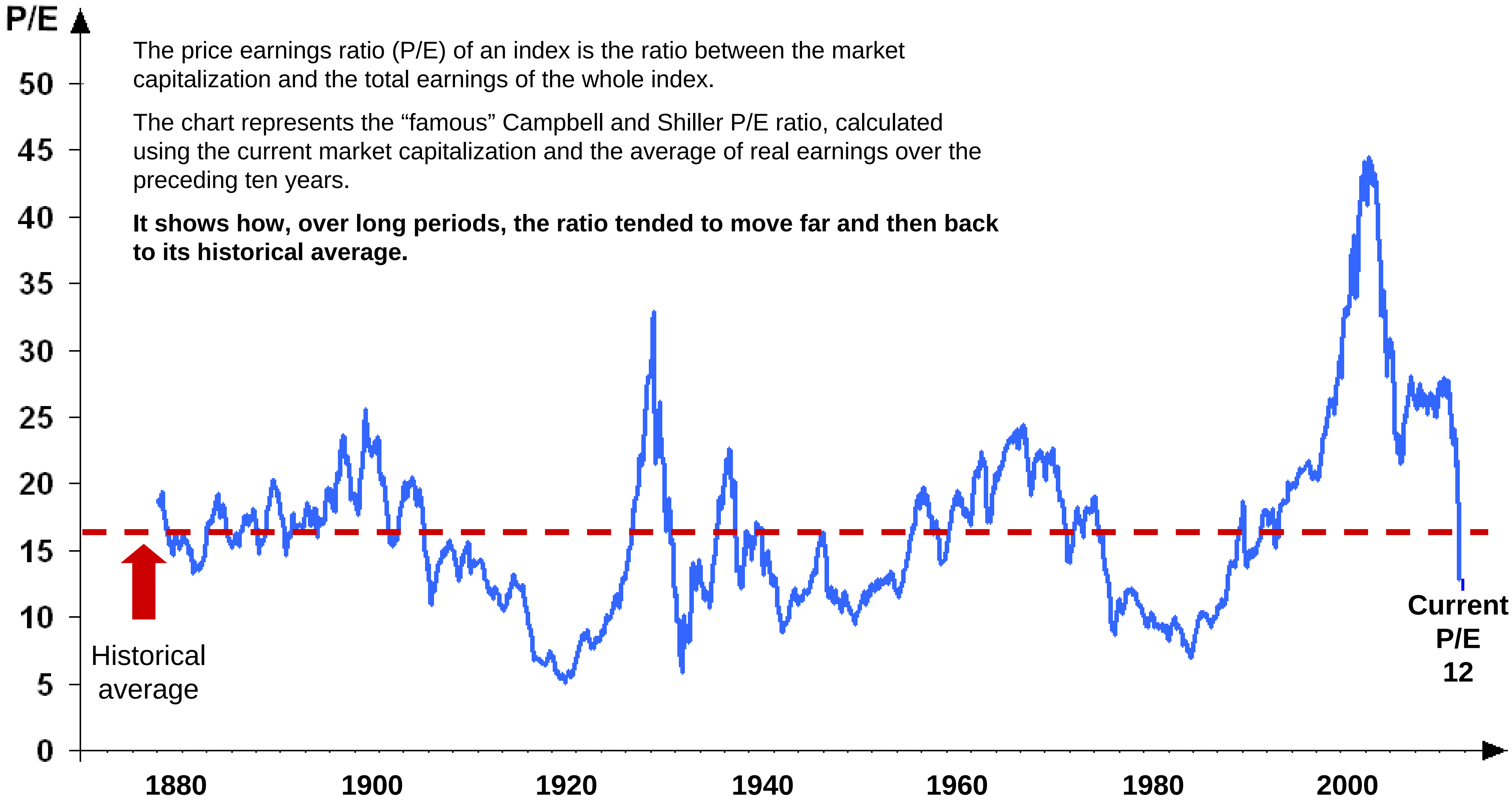
Long term stock market behaviour

S&P 500 P/E ratio

The price earnings ratio (P/E) of an index is the ratio between the market capitalization and the total earnings of the whole index.

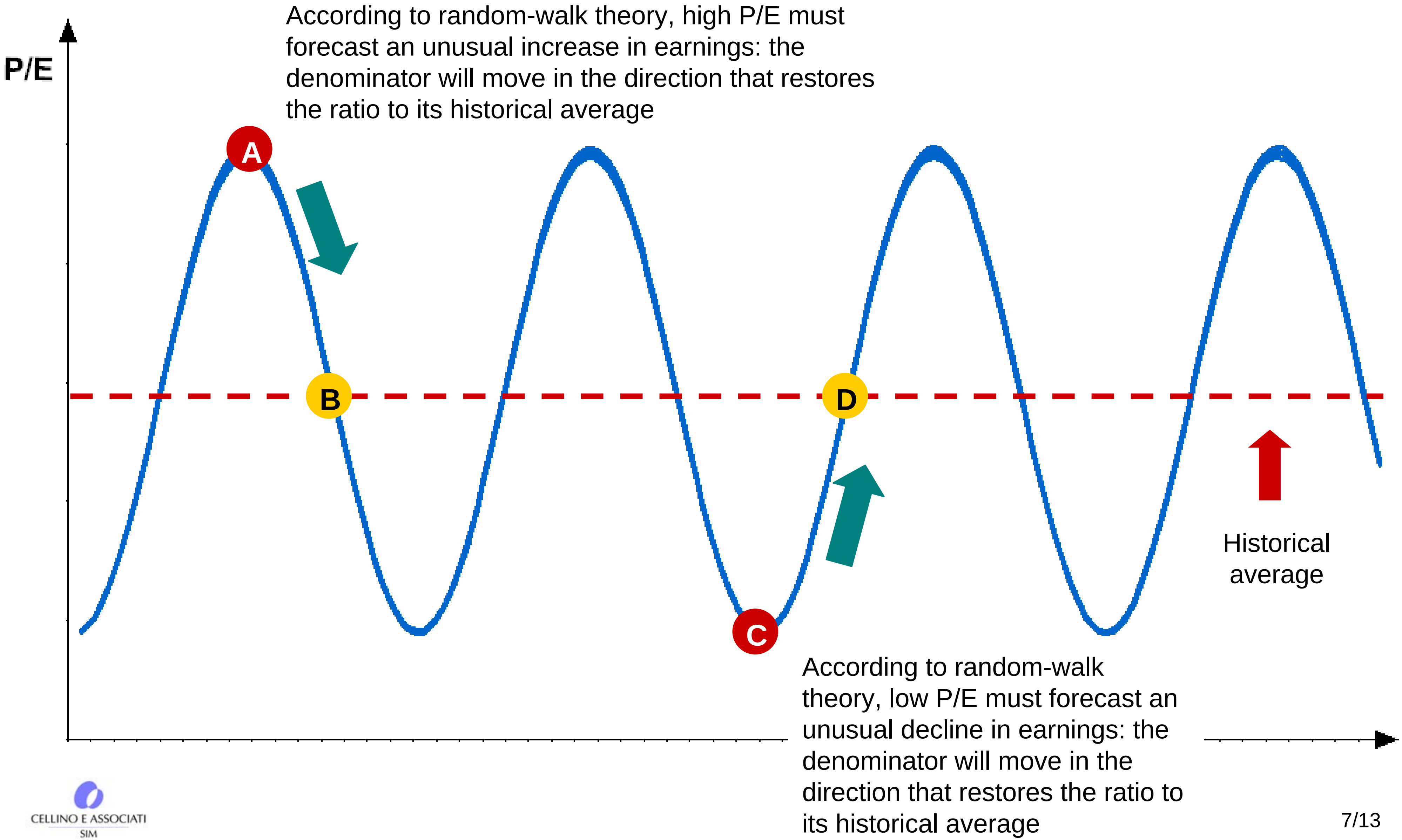
The chart represents the "famous" Campbell and Shiller P/E ratio, calculated using the current market capitalization and the average of real earnings over the preceding ten years.

It shows how, over long periods, the ratio tended to move far and then back to its historical average.



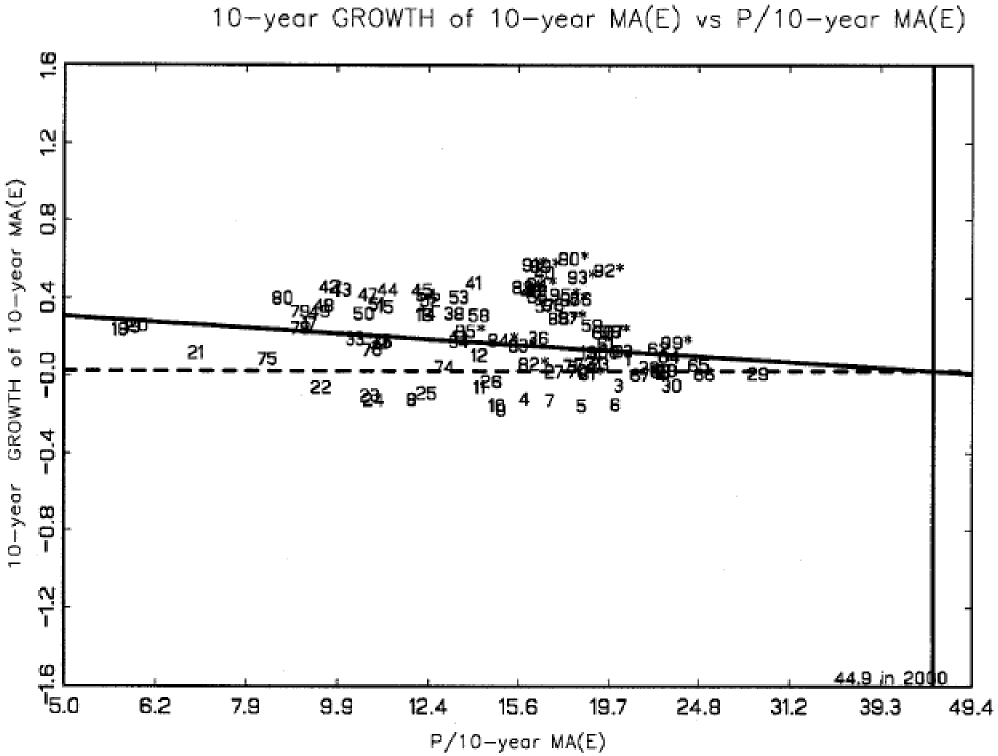
Source: R.J. Shiller

Long term stock market behaviour

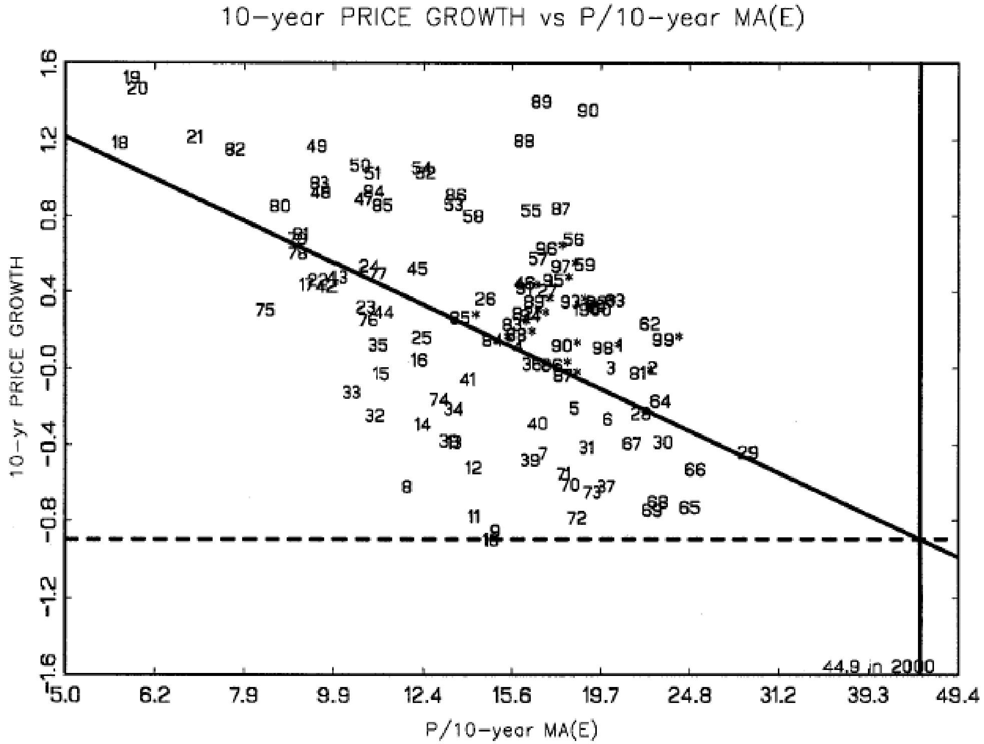


Long term stock market behaviour

P/E ratio is good forecaster of growth in stock price, not of earnings growth



Source: J.Y. Campbell and R.J. Shiller



Source: J.Y. Campbell and R.J. Shiller

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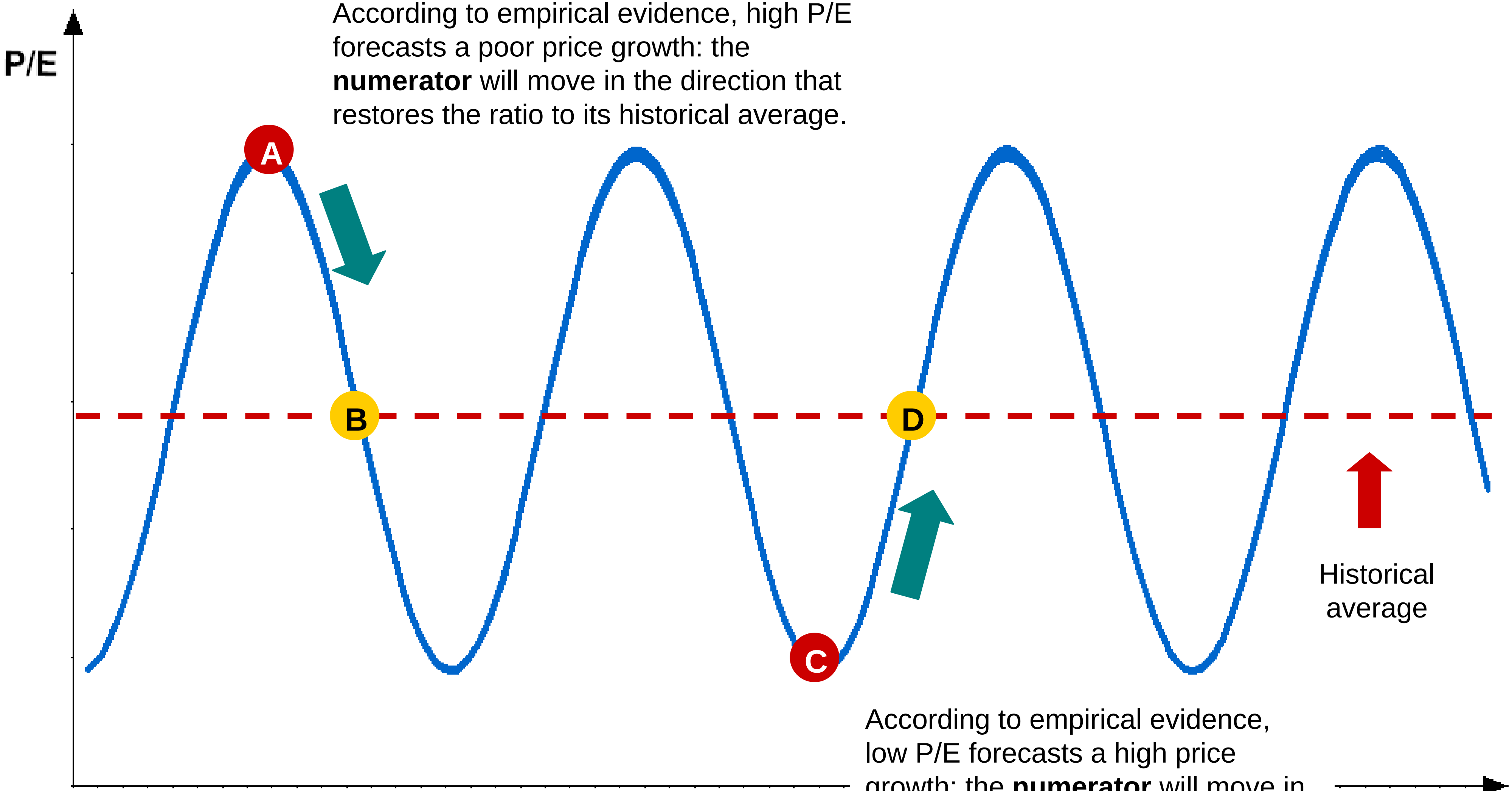
Long term stock market behaviour

According to empirical evidence, high P/E forecasts a poor price growth: the **numerator** will move in the direction that restores the ratio to its historical average.



According to empirical evidence, low P/E forecasts a high price growth: the **numerator** will move in the direction that restores the ratio to its historical average.

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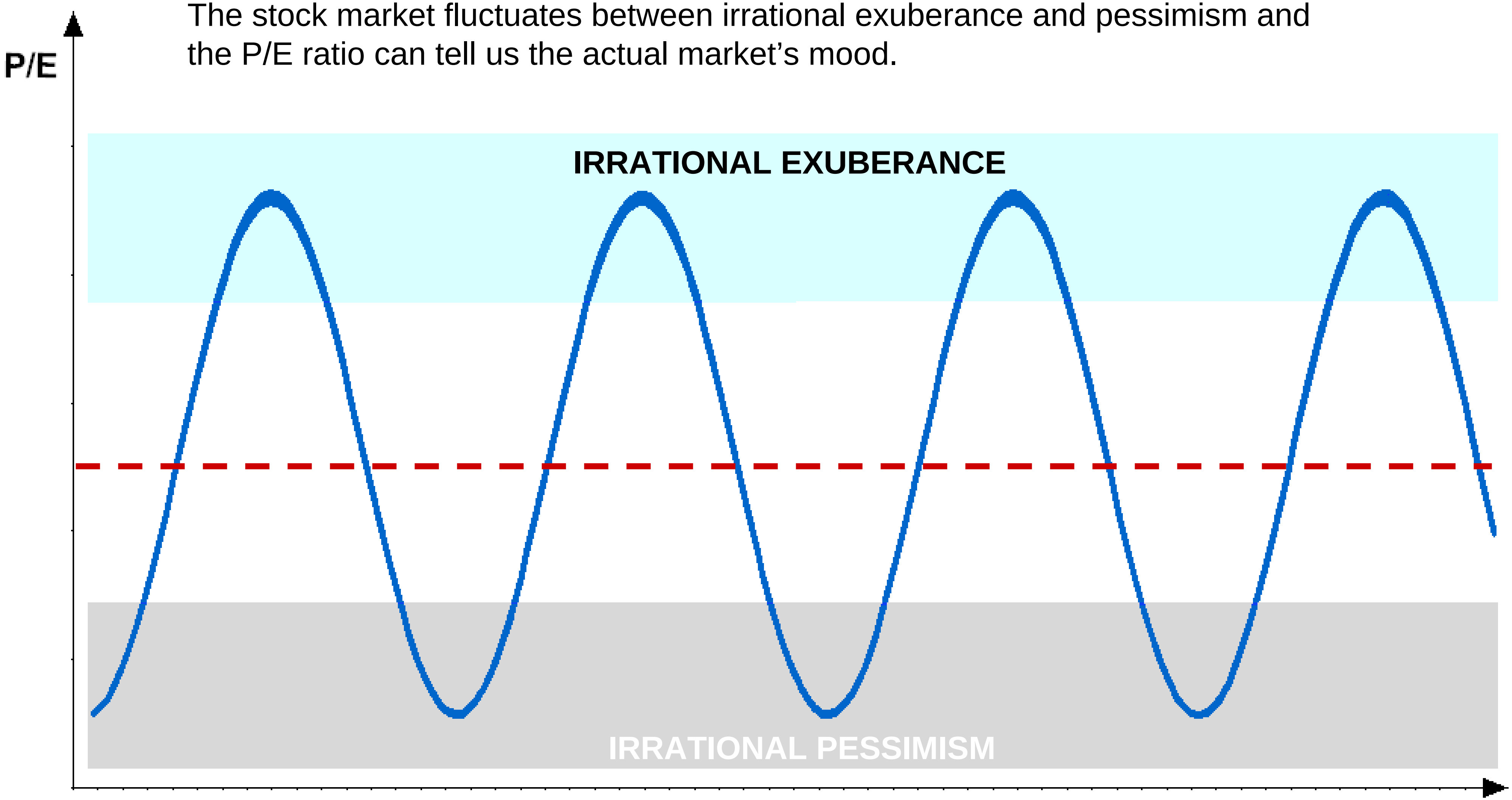
Long term stock market behaviour

The stock market fluctuates between irrational exuberance and pessimism and the P/E ratio can tell us the actual market's mood.



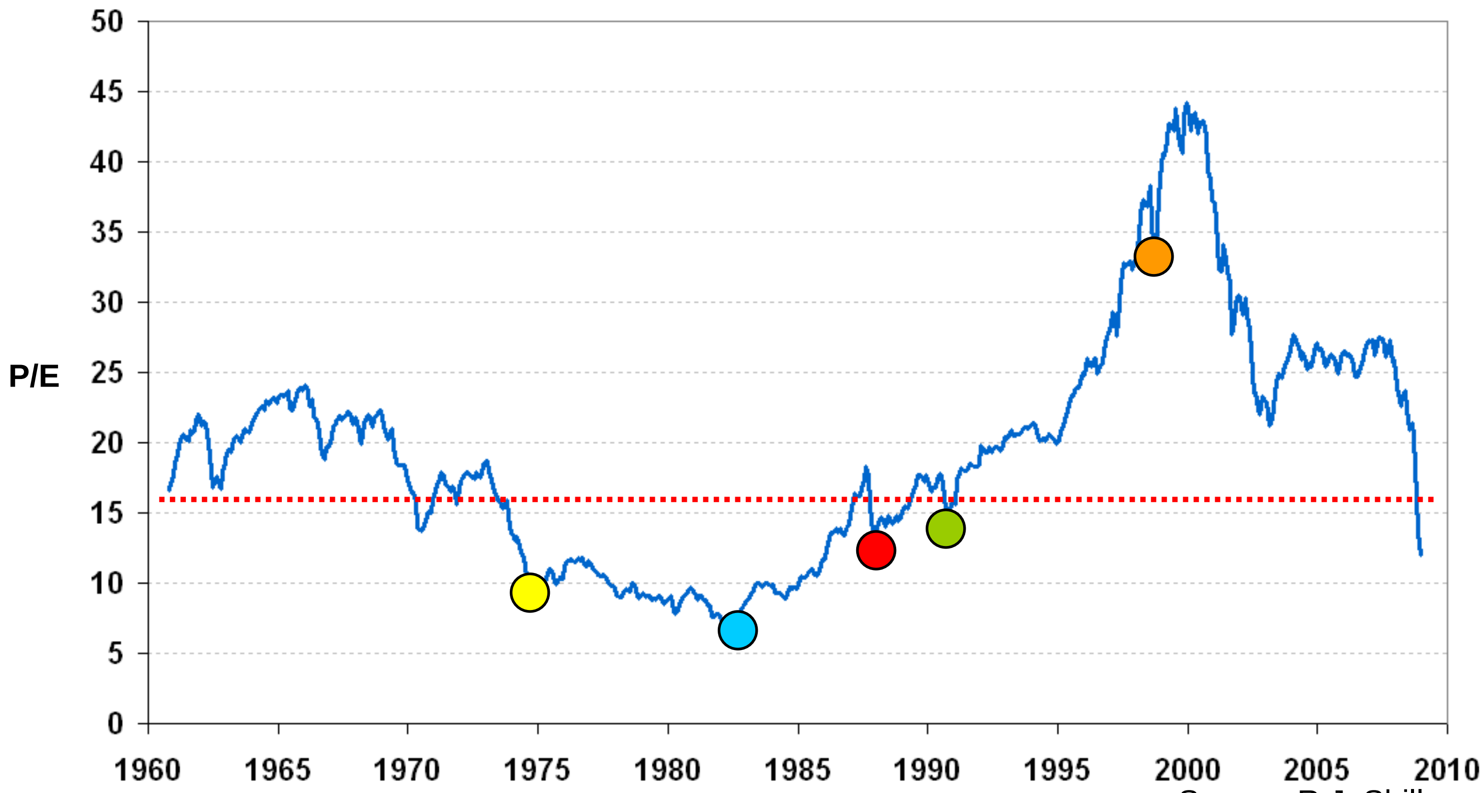
What about last crises?

Event	Period	Subsequent 10 years annualized price growth
Recession and oil crisis	**1973-1975**	**9.4%**
Recession	**1981-1982**	**14.4%**
Wall Street crash	**october 1987**	**16.0%**
First gulf war and recession	**1990-1991**	**16.5%**
Bankruptcy of LTCM and asian financial crisis	**1997-1998**	**3.0%**

Source: FactSet

Prices grew more than their average when the market bottomed with a P/E ratio below its average.

On the contrary prices grew poorly when the market bottomed with a P/E ratio above its average.



Source: R.J. Shiller

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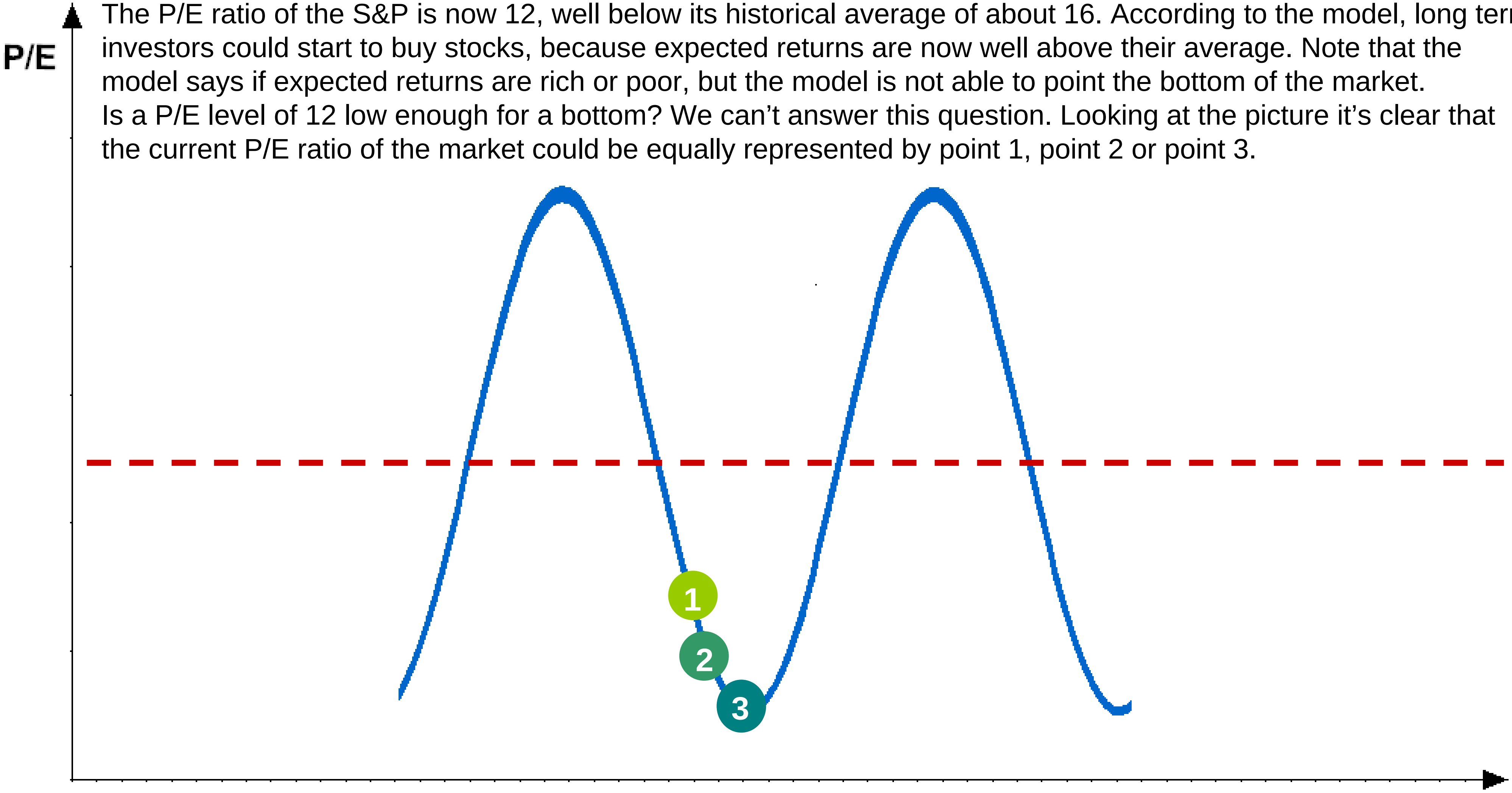
Where are we now?

The P/E ratio of the S&P is now 12, well below its historical average of about 16. According to the model, long term investors could start to buy stocks, because expected returns are now well above their average. Note that the model says if expected returns are rich or poor, but the model is not able to point the bottom of the market.
Is a P/E level of 12 low enough for a bottom? We can’t answer this question. Looking at the picture it’s clear that the current P/E ratio of the market could be equally represented by point 1, point 2 or point 3.



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