

SECOND PRINCIPLE OF SOUND INVESTING

IT IS IMPOSSIBLE TO PREDICT INVESTMENT RETURNS

1. Economic forecasts beyond one year have little predictive value
2. Bankers cannot predict stock returns, exchange rates, or bond yields
3. Recommendations by stock analysts do not predict performance
4. Experts often show the same pro-cyclical behavior as small investors

“If the future were merely a continuation of the trends that prevailed in the past, it would not be uncertain ... But as this is not the case, what is called economic forecasting is merely guesswork.”

Ludwig von Mises, *Human Action* (1949)

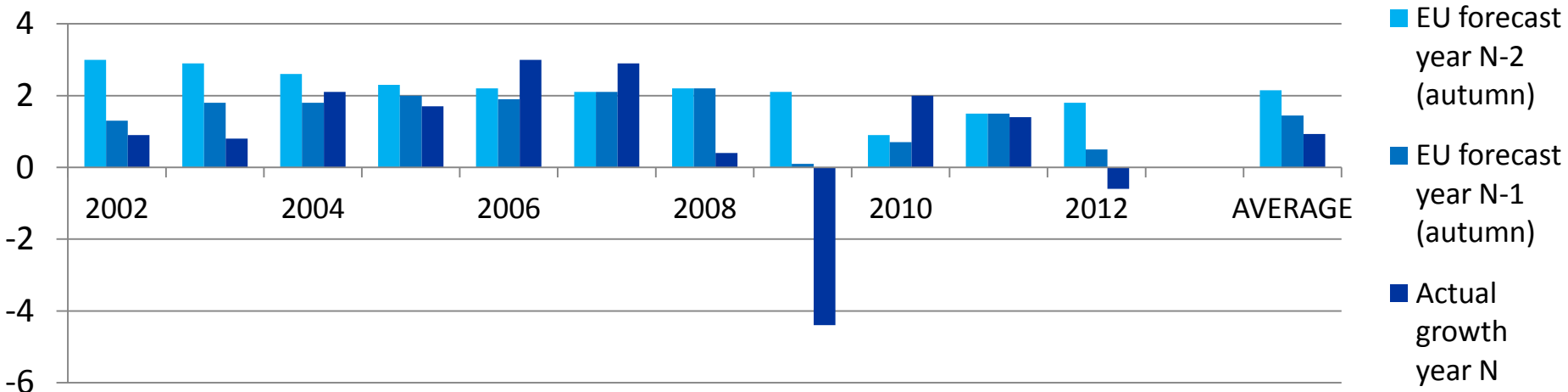
“Financial forecasting appears to be a science that makes astrology look respectable... Security analysts have enormous difficulty in ... forecasting earning prospects for the companies they follow.”

Burton Malkiel, *A Random Walk Down Wall Street* (1973)

Economic forecasts beyond one year seem to have little predictive value

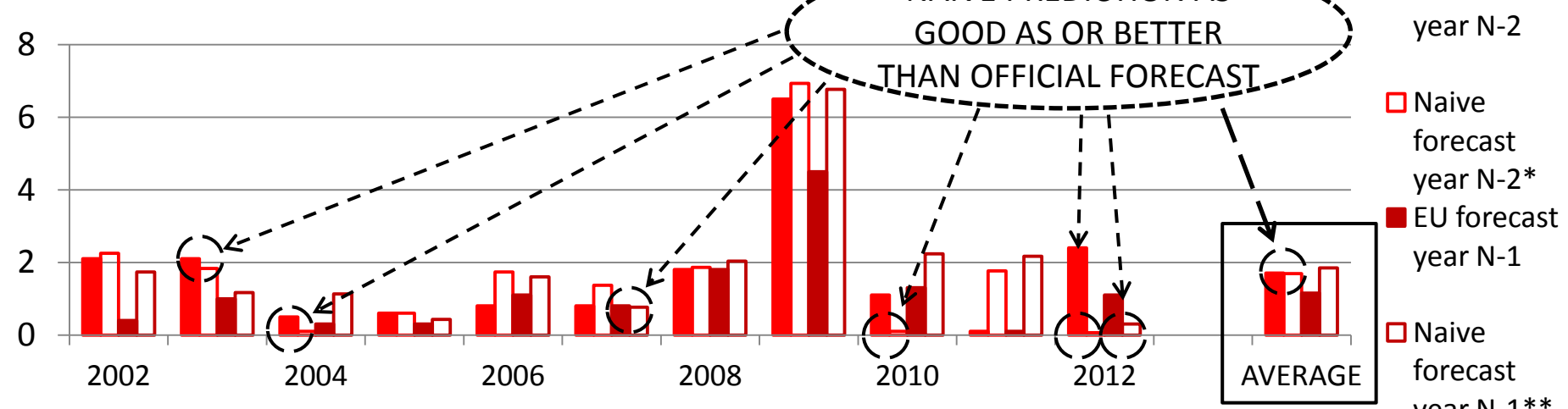
EUROZONE REAL GDP GROWTH FORECASTS VS. ACTUAL GROWTH

In %



ABSOLUTE FORECASTING ERROR EU VS. NAIVE PREDICTION (AVERAGE OF LAST 3 YEARS)

In %-points



Source: European Commission

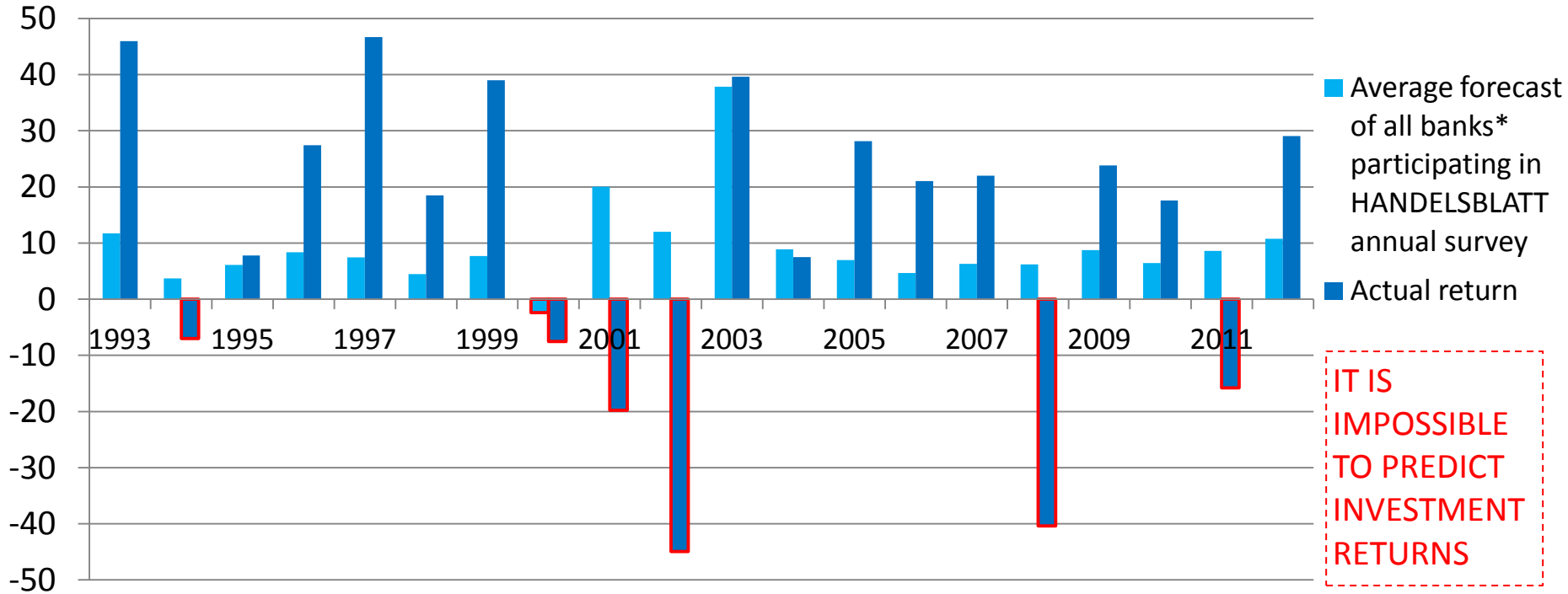
* Average of last 3 years before previous

** Average of last 3 years before current

German bankers cannot predict the return of German stocks

AVERAGE FORECAST VS. ACTUAL ANNUAL RETURN OF GERMAN STOCKS

Change of DAX index in %



Right direction?	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓
Right magnitude? (+/- 10%)	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗

Only 1 out of 6 negative returns predicted

Only 4 out of 20 returns predicted with <10% error

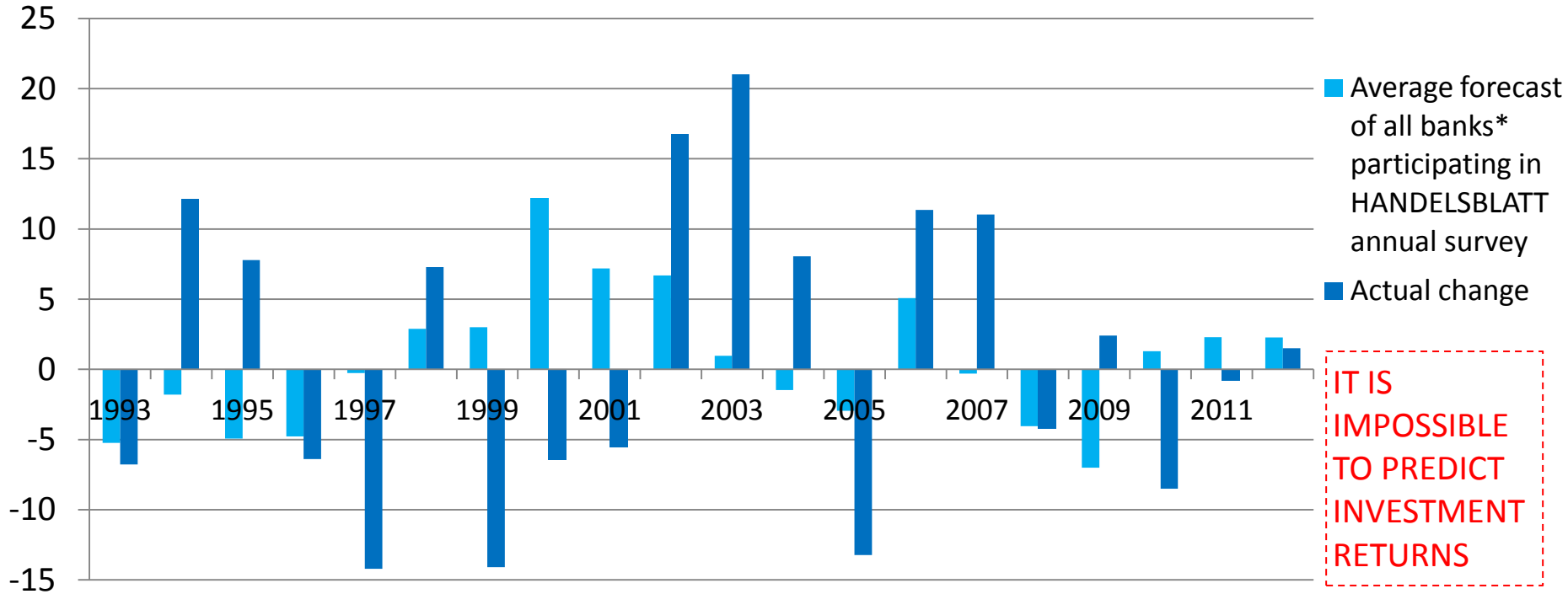
Source: Handelsblatt; own calculations

* About 40 banks operating in Germany, including Bank of America, BNP Paribas, Citigroup, Commerzbank, Credit Suisse, Deutsche Bank, Goldman Sachs, JP Morgan, Morgan Stanley, Société Générale, UBS, Unicredit

They cannot predict the US dollar exchange rate either

AVERAGE FORECAST VS. ACTUAL ANNUAL CHANGE IN DM/EURO-USD EXCHANGE RATE

In %



IT IS IMPOSSIBLE TO PREDICT INVESTMENT RETURNS

Right direction?	(✓)	X	X	(✓)	(✓)	(✓)	X	X	X	(✓)	(✓)	X	(✓)	(✓)	X	(✓)	X	X	X	(✓)
Right magnitude? (+/- 5%)	(✓)	X	X	(✓)	X	(✓)	X	X	X	X	X	X	X	X	X	(✓)	X	X	(✓)	(✓)

10 out of 20 directions correct (same as coin)

Only 6 out of 20 changes predicted with <5% error

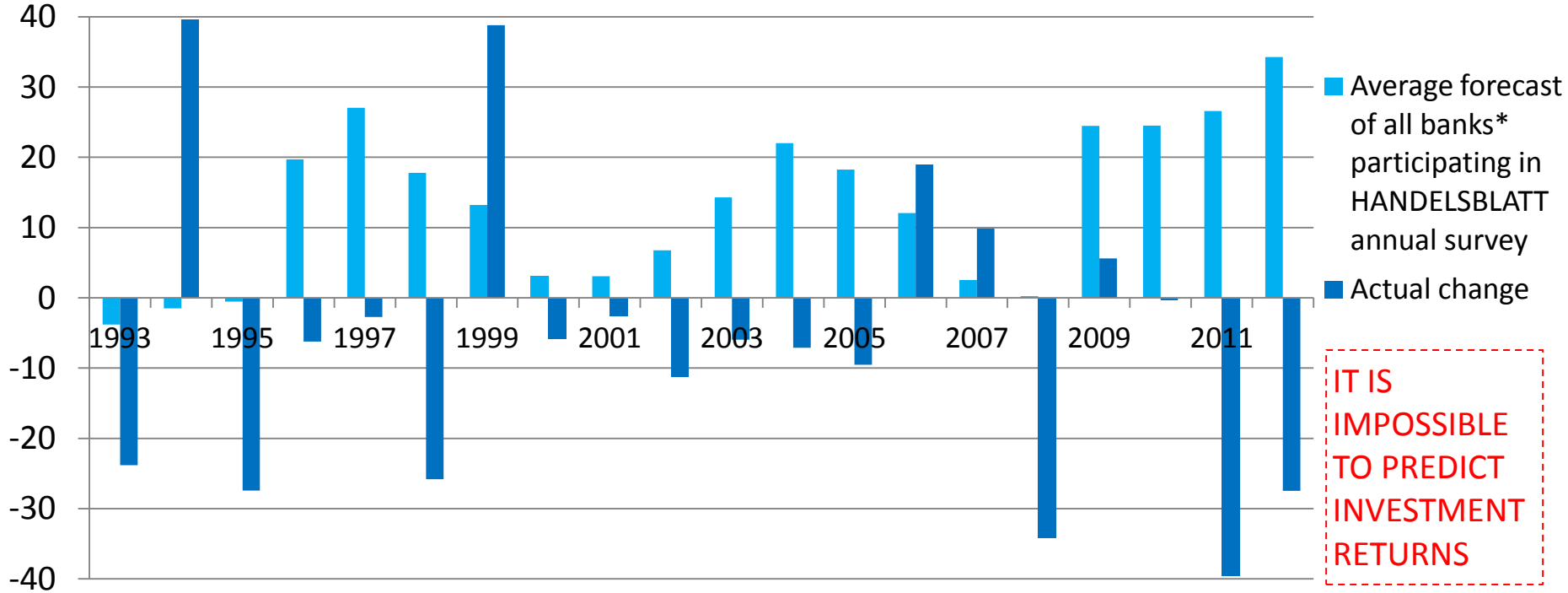
Source: Handelsblatt; own calculations

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German bankers cannot predict the yield of German government bonds

AVERAGE FORECAST VS. ACTUAL ANNUAL CHANGE IN TEN-YEAR BUND YIELDS

In %



IT IS IMPOSSIBLE TO PREDICT INVESTMENT RETURNS

Right direction?	(✓)	X	(✓)	X	X	X	(✓)	X	X	X	X	X	(✓)	(✓)	X	(✓)	X	X	X
Right magnitude? (+/- 10%)	X	X	X	X	X	X	(✓)	(✓)	X	X	X	X	(✓)	(✓)	X	X	X	X	X

6 out of 20 directions correct (worse than coin)
Only 4 out of 20 changes predicted with <10% error

Source: Handelsblatt; own calculations

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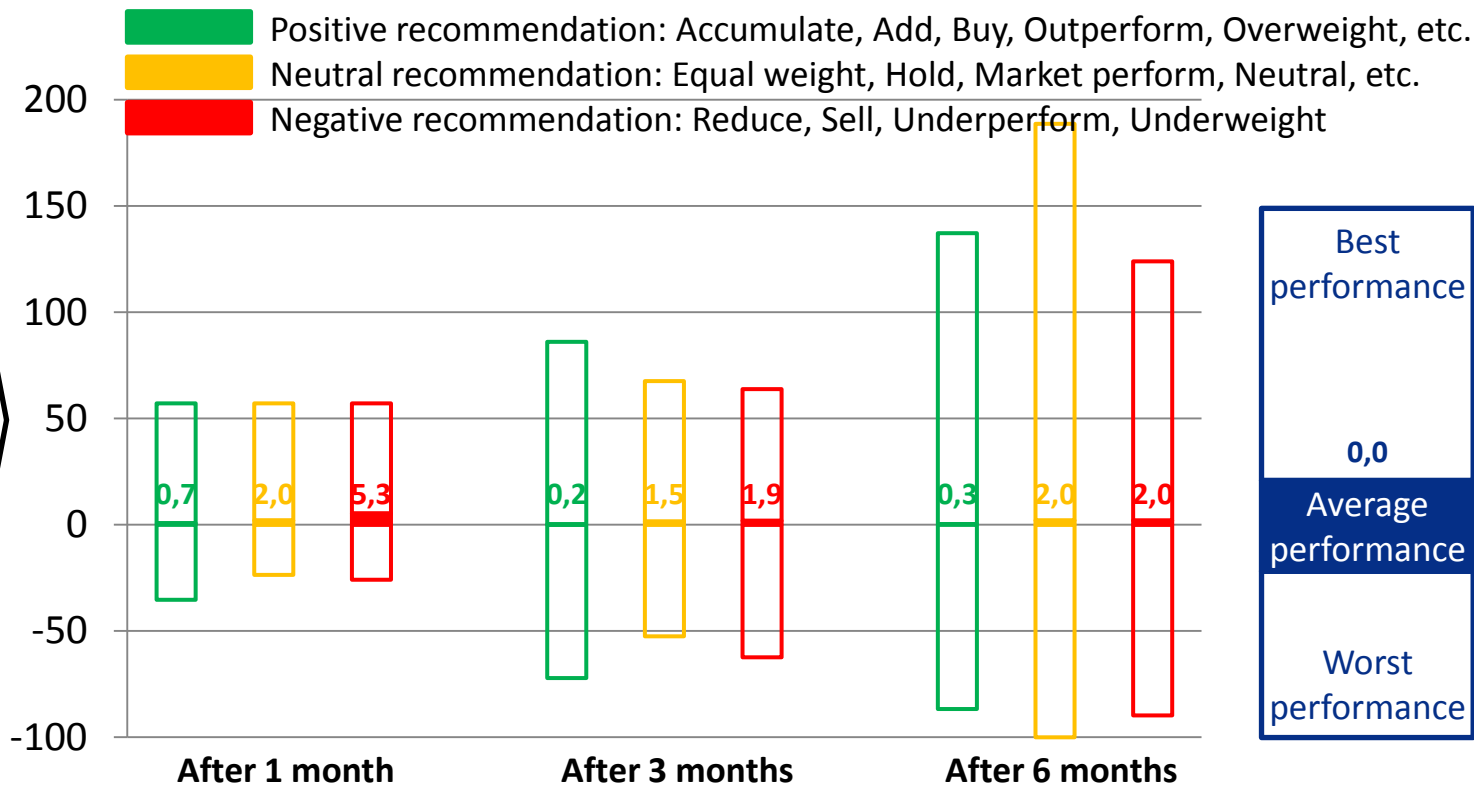
Recommendations by stock analysts have no predictive value

STOCK PERFORMANCE MINUS INDEX PERFORMANCE* AFTER 1, 3 AND 6 MONTHS

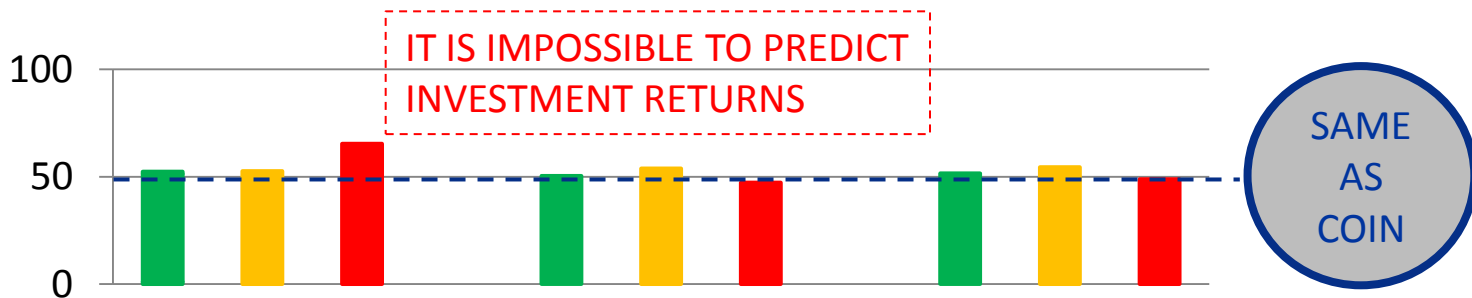
In %

SAMPLE

- 1.018 stock recommendations
- by 125 stock analysts (banks)
- covering 574 public companies
- in 35 markets (stock indices)
- published between 17.12. and 31.12.2012 on onvista.de



SHARE OF OUT-PERFORMERS
in % of recommendations



Source: Onvista.de, other investment sites; own calculations

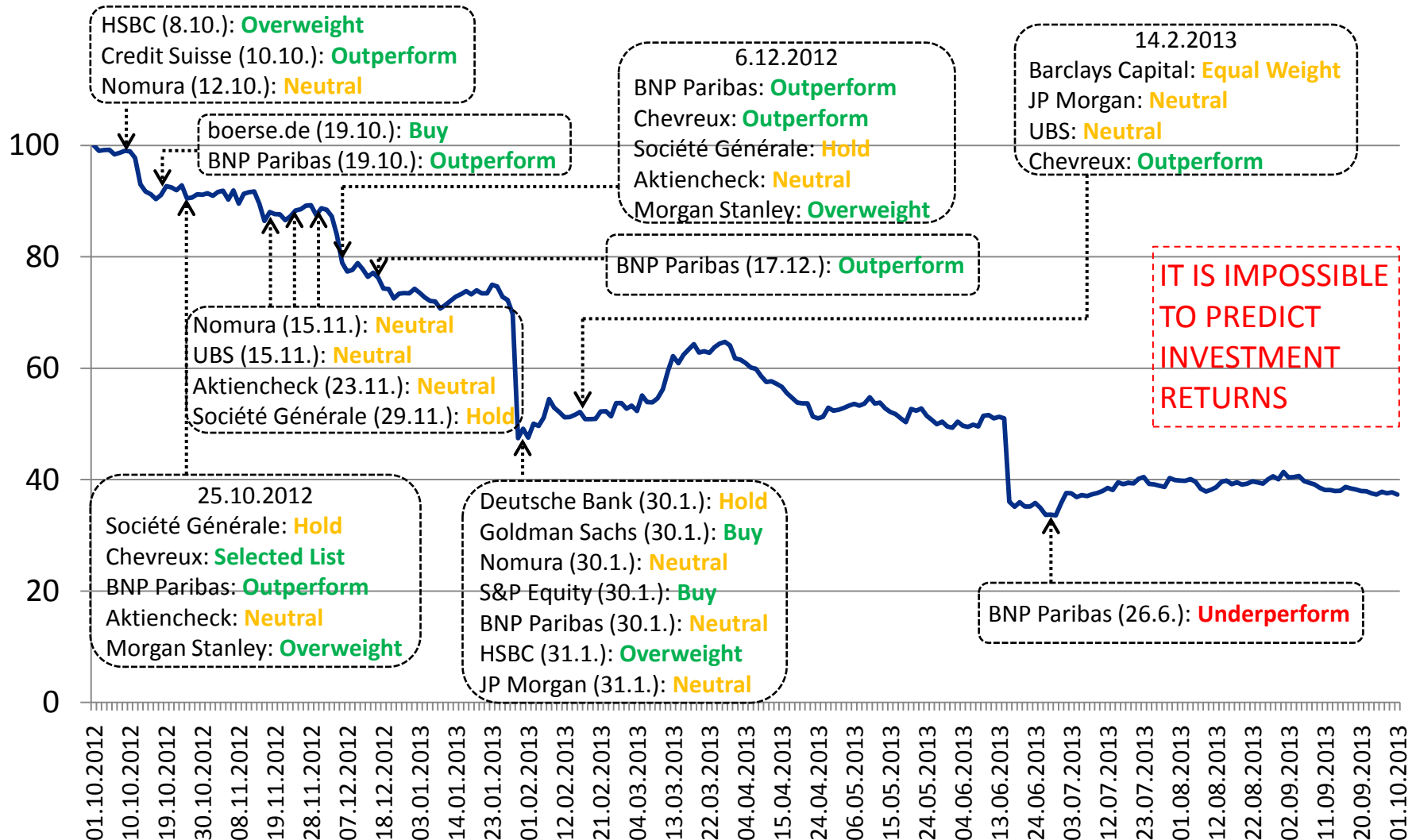
* Change of stock price (%) – change of stockmarket price index (%)

Matthias Kelm, Ph.D., Independent Economic Advisor, Tareno (Luxembourg) S.A.

Experts often display the same pro-cyclical behavior as private investors

STOCK PERFORMANCE AND RECOMMENDATIONS SAIPEM S.P.A. 1.10.2012 -30.9.2013

Relative performance vs. MBI index; 1.10.2012 = 100



Source: onvista.de, ariva.de; own calculations

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