

# finexpert report

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## capital market data

### Content

- 1 Preface & People
- 2 Multiples: Procedure & How to read our charts
- 3 Multiples: EV/EBIT
- 8 Multiples: EV/EBITDA
- 13 Multiples: P/E
- 19 CAPM-beta factors development
- 32 PECorner - The finexpert Private Equity newsflash
- 34 Current Research: Conglomerates

## Preface

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Dear finexpert members!

Attached to this message you will find our first finexpert market update. I am proud to announce that this overview on capital market data will from now on be offered to you every quarter. Being the only objective, market based, regularly published and free accessible industry data finexpert industry multiples and betas have become an important information source for market participants. In the quarterly update our well known tables of current multiples and beta estimates will be combined with comments and graphs on the most recent developments of this market data.

Additionally the quarterly market update will contain information on recent transactions and exits in the PE sector in Germany and Worldwide; this data are collected from a special PE transaction database at the chair for financial management @ HHL which is based on ZEPHYR.

Finally our update will pick one particular scientific point of interest and give a short comment on most recent developments in the academic discussion on this field. For our first update we chose the pros and cons of corporate diversification; in the light of the last financial crisis capital markets seem to adjust their perception of conglomerates. It will be interesting to see whether this trend will prevail in the next financial crisis.



Yours,

A handwritten signature in black ink that reads "Bernhard Schwetzler".

Prof. Dr. Bernhard Schwetzler,  
Chair of Financial Management  
Handelshochschule Leipzig

## People

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**Capital Market Data, Studies, External Seminars, Newsletter**  
Research Interests: Corporate Finance & Corporate Valuation



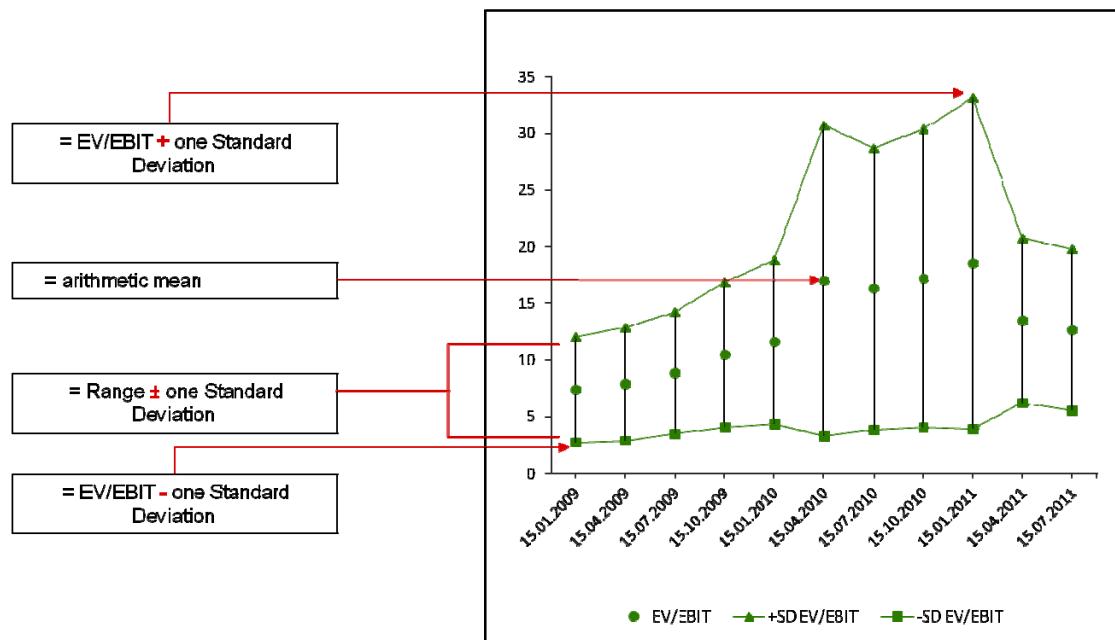
**Current Topics, Scientific Publications**  
Research Interests: Asset Pricing & Corporate Valuation

## Multiples: Procedure

- We estimated industry multiples based on industry indices provided by Deutsche Börse AG
- Time frame: Jan 2006 – Jul 2011 (full coverage of financial crisis and recovery)
- We calculated EV/EBIT, EV/EBIT 1Year Forward, EV/EBITDA, EV/EBITDA 1Year Forward, Price/Earning and Price/Earning 1Year Forward,
- EV/EBIT, EV/EBIT 1Y Forward are not available for banks, financials and insurance
- Earning estimates for forward-multiples have been taken from I/B/E/S
- Quarterly estimates, Industry composition changes over time
- In each estimation period we excluded outliers multiples beyond the limit of the 5%-quantile

## Multiples: How to read our Charts?

### Example: EV/EBIT multiple, trailing



In the following charts you will find **forward multiples** (blue) and **trailing multiples** (green) combined in one chart.

## Multiples: EV/EBIT

### Executive Summary

- Slight decrease of EV/EBIT multiples in most industries and indices
- Forward and trailing multiples slightly below their historical average since 2006
- Optimistic outlook for EBIT 2011 based on forward multiples for the industries Automobiles, Technology and Telecommunications

### Analysis

Enterprise value to EBIT multiples showed a slight decline in most industries and indices compared to July. Major reason for this development is the sharp drop in equity market values. From July 15th to October 15th DAX 30 dropped from 7,220 to 5,967 and Prime All Share index dropped from 2,696 to 2,233 points. With last reported EBIT (of 2010) remaining stable the EV/EBIT trailing multiple of DAX 30 dropped from 13.2 to 12.2; and the corresponding Prime All Share index dropped from 12.6 to 11.4.

In a historical perspective this is slightly below the average since 2006: For the DAX 30 EV/EBIT this average was 13.7 with a minimum of 8.8 and a maximum of 20.7. For the Prime All Share this average was 13.4 with a minimum of 7.4 and a maximum of 19.4 (see charts below).

Further one year forward EV/EBIT multiples based on the I/B/E/S projected 2011 figures may look very beneficial to investors. The EV/EBIT DAX 30 forward multiple is 10.0 and the EV/EBIT multiple of Prime All Share is 9.1. These values are significantly lower than their historical averages since 2006: For DAX 30 this average was 11.6 with a minimum of 7.4 and a maximum of 16.7. For the Prime All Share this average was 11.3 with a minimum of 6.8 and a maximum of 16.5.

For almost all industries we see lower one year forward multiples based on I/B/E/S projected 2011 figures than based on 2010 estimates. Therefore analysts still seem to be optimistic that EBIT 2011 will at least be above the 2010 figures in those industries. An exception is Utility where trailing EV/EBIT multiple is 6.8 and forward multiple is 9.1. A more optimistic view based on 2011 compared to 2010 offer Automobiles, Technology, and Telecommunications: here forward 2011 multiples are 25% below the trailing multiple. Outstanding with this respect is Basic Resources with a multiple of 12.7 and a forward multiple of 7.1 only.

## Prime All Share Industries, DAX 30, TecDAX 30, MDAX 50: EV/EBIT

as at 15.10.2011

Source: Datastream

	Trailing EV/EBIT				1 YR Forward EV/EBIT					
	Arithm. mean	Median	Harm. mean	Variance	n	Arithm. mean	Median	Harm. mean	Variance	n
Automobiles	11,5	11,2	11,0	6,5	11	8,4	7,7	7,9	4,2	11
Basic Resources	12,7	7,5	7,2	118,4	6	7,1	6,4	5,4	11,8	5
Chemicals	12,6	9,5	10,2	49,4	11	9,6	8,4	8,5	14,9	11
Construction	12,3	11,6	8,8	47,0	5	11,3	10,1	10,9	7,2	6
Consumer	10,1	9,1	8,2	21,0	16	8,7	9,0	7,6	8,6	17
Food & Beverages	11,6	11,6	11,6		1	9,9	9,9	9,9		1
Industrial	10,8	9,0	6,4	43,8	68	8,8	8,4	7,1	13,9	70
Media	10,9	9,0	2,9	71,4	10	8,6	8,0	2,1	33,1	8
Pharma & Healthcare	12,9	13,0	9,4	32,1	19	10,6	9,2	8,4	18,7	20
Retail	9,8	9,6	8,6	16,6	15	9,1	7,5	7,5	20,1	11
Software	12,2	9,6	9,2	45,6	34	9,3	8,7	8,1	12,6	29
Technology	11,7	11,9	3,6	53,3	18	8,7	7,7	6,7	17,8	20
Telecommunication	14,3	13,5	13,4	14,4	7	10,1	10,7	3,1	30,5	6
Transport. & Logistics	11,3	9,9	9,9	19,0	9	10,1	9,5	9,5	7,4	9
Utilities	6,8	5,8	6,4	4,6	3	9,4	10,8	8,8	6,2	3
<b>Prime All Share</b>	<b>11,4</b>	<b>10,0</b>	<b>6,9</b>	<b>38,9</b>	<b>233</b>	<b>9,1</b>	<b>8,6</b>	<b>6,7</b>	<b>14,2</b>	<b>227</b>
<b>DAX 30</b>	<b>12,2</b>	<b>12,0</b>	<b>10,4</b>	<b>22,1</b>	<b>25</b>	<b>10,0</b>	<b>9,7</b>	<b>9,3</b>	<b>7,4</b>	<b>25</b>
<b>TecDAX 30</b>	<b>11,7</b>	<b>10,0</b>	<b>6,5</b>	<b>59,0</b>	<b>25</b>	<b>8,8</b>	<b>8,6</b>	<b>6,3</b>	<b>20,3</b>	<b>25</b>
<b>MDAX 50</b>	<b>14,0</b>	<b>12,4</b>	<b>11,2</b>	<b>44,6</b>	<b>42</b>	<b>10,1</b>	<b>9,4</b>	<b>9,2</b>	<b>10,9</b>	<b>43</b>

## Development of Multiples EV/EBIT - Overview

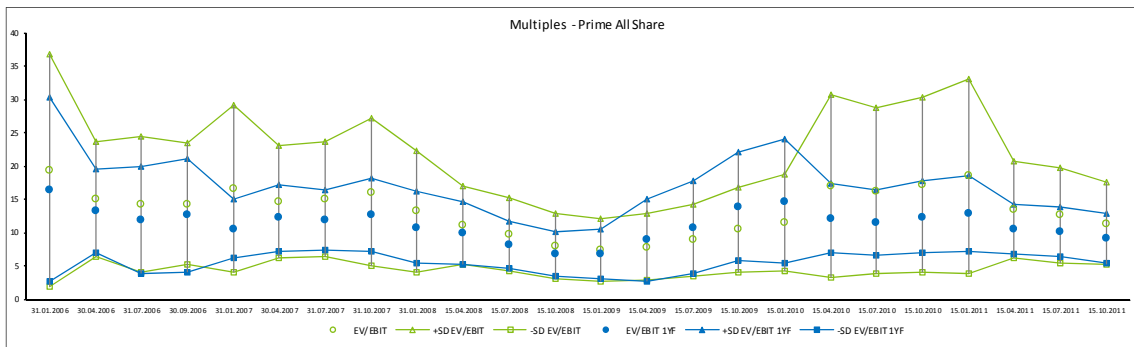


Fig. 1: EV/EBIT - Prime All Share

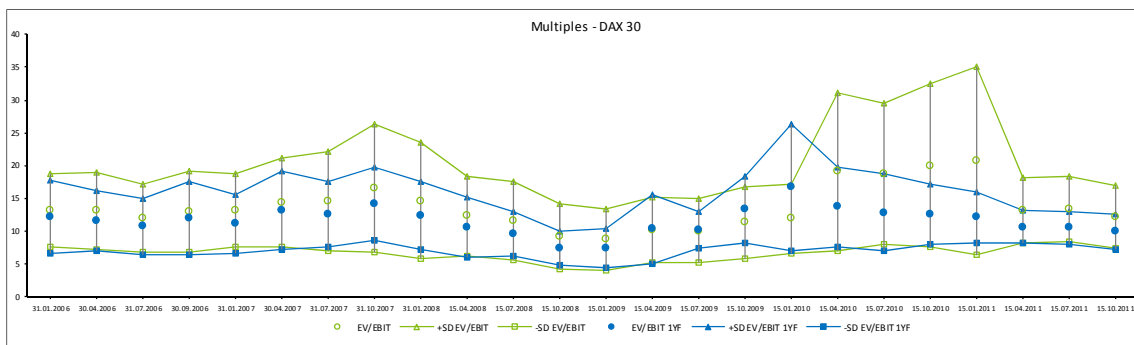


Fig. 2: EV/EBIT - DAX 30

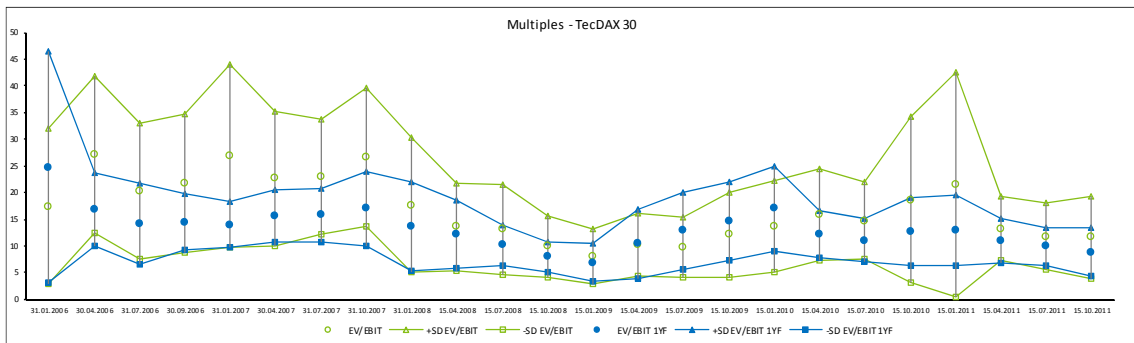


Fig. 3: EV/EBIT - TecDAX 30

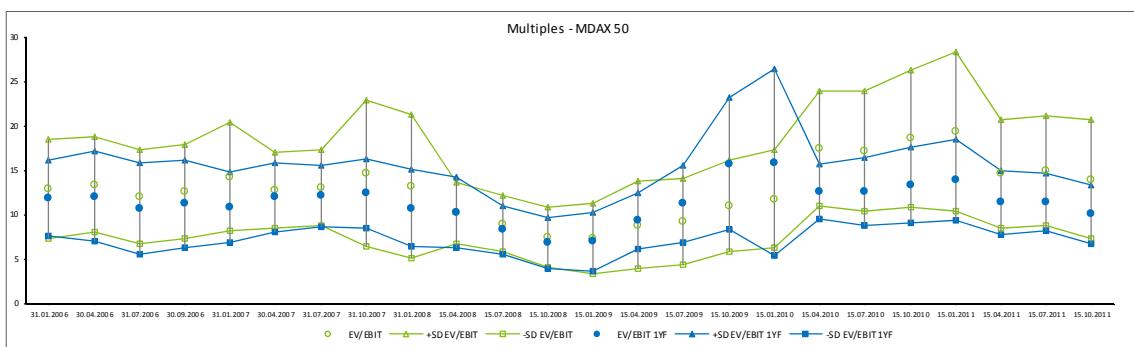


Fig. 4: EV/EBIT - MDAX 50

## Development of Multiples EV/EBIT - Per Industry I/II

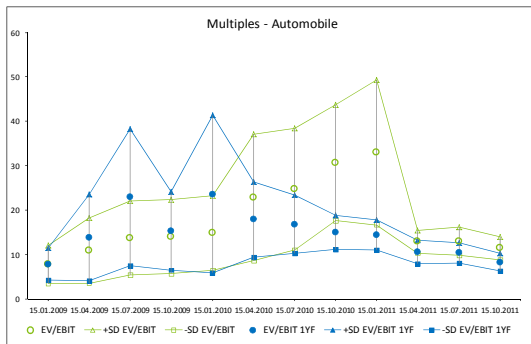


Fig. 5: EV/EBIT - Automobiles

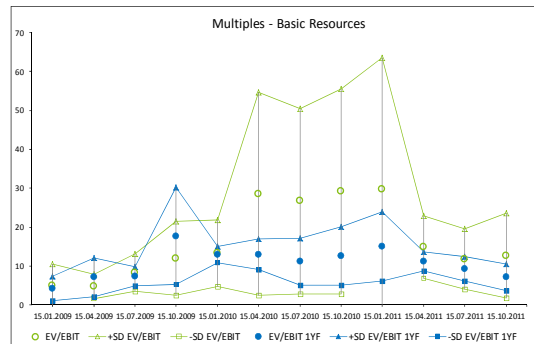


Fig. 6: EV/EBIT - Basic Resources

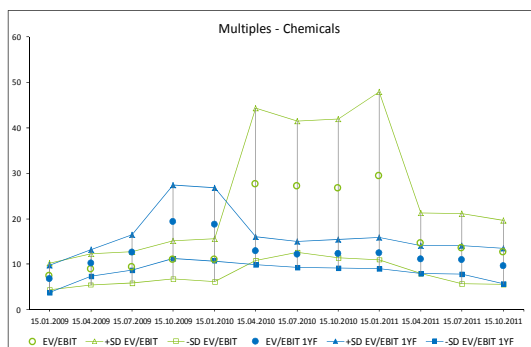


Fig. 7: EV/EBIT - Chemicals

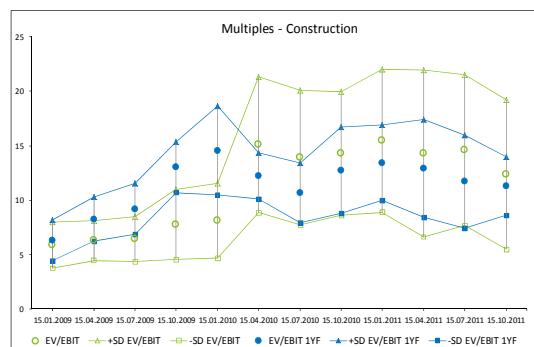


Fig. 8: EV/EBIT - Construction

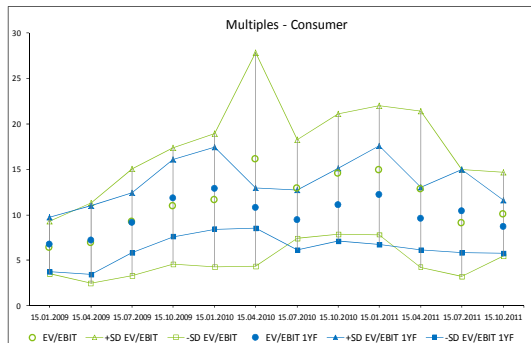


Fig. 9: EV/EBIT - Consumer

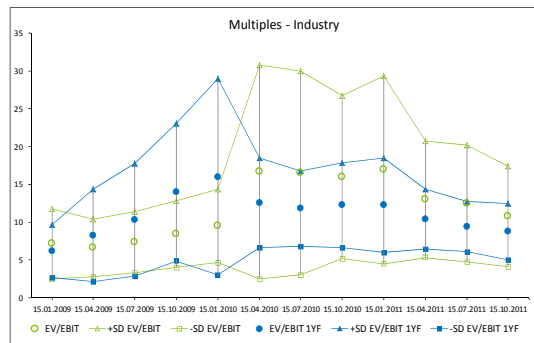


Fig. 10: EV/EBIT - Industrial

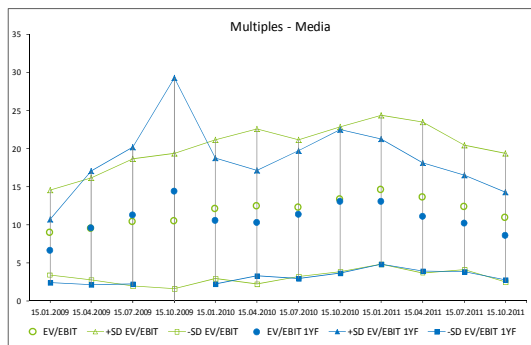


Fig. 11: EV/EBIT - Media

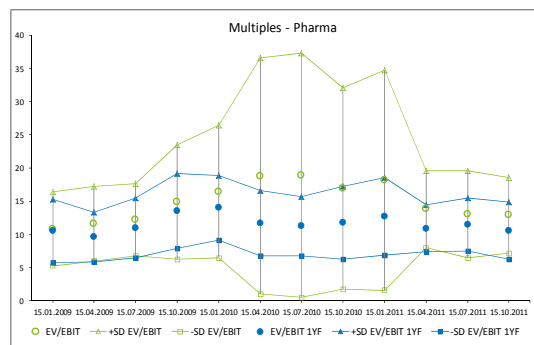


Fig. 12: EV/EBIT - Pharma & Healthcare

## Development of Multiples EV/EBIT - Per Industry II/II

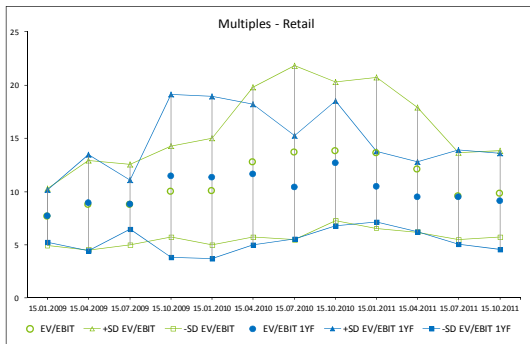


Fig. 13: EV/EBIT - Retail

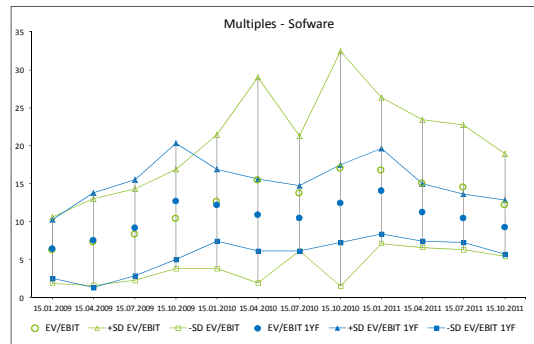


Fig. 14: EV/EBIT - Software

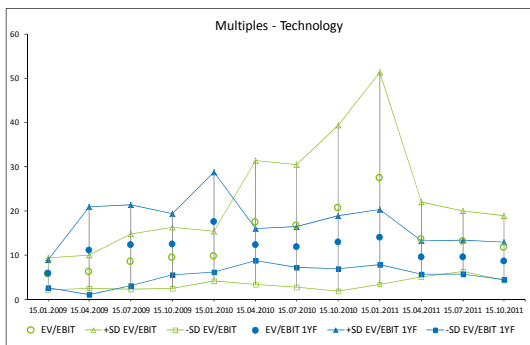


Fig. 15: EV/EBIT - Technology

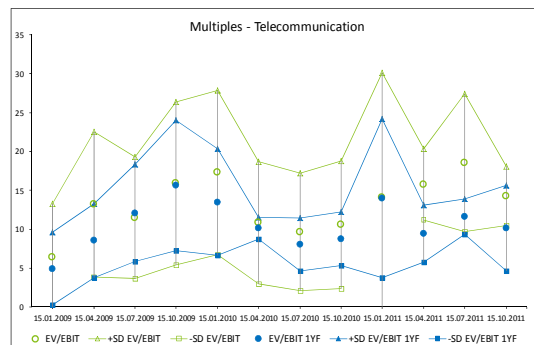


Fig. 16: EV/EBIT - Telecommunication

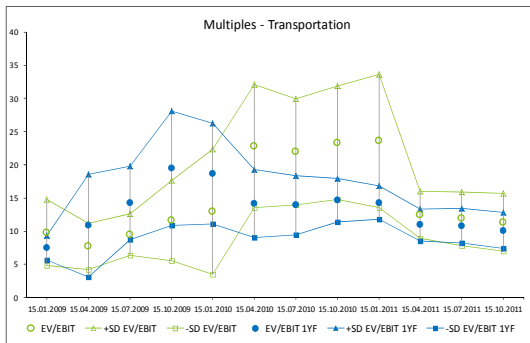


Fig. 17: EV/EBIT - Transport. & Logistics

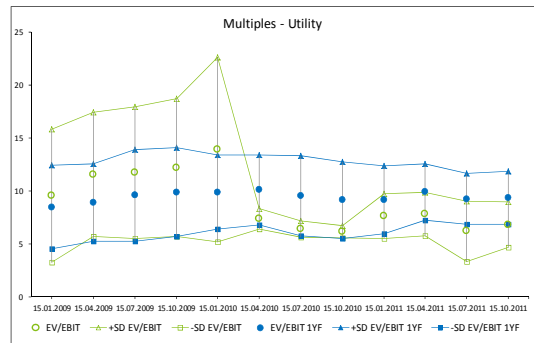


Fig. 18: EV/EBIT - Utilities



## Multiples: EV/EBITDA

### Executive Summary

- Slight decrease of EV/EBITDA multiples in most industries and indices
- Forward and trailing multiples slightly below their historical average since 2008
- Optimistic outlook for EBITDA 2011 based on forward multiples for almost all industries; Exceptions are Construction and Utility

### Analysis

Enterprise value to EBITDA multiples showed a slight decrease in most industries and indices compared to July. With realized EBITDA of 2010 remaining constant the EV/EBITDA multiple dropped for the DAX 30 from 8.0 to 7.2 and for Prime All Share from 8.3 to 7.1.

In a historical perspective this is slightly below the average since 2008: For the DAX 30 EV/EBITDA this average was 7.7 with a minimum of 5.4 and a maximum of 10.5. For the Prime All Share this average was 7.6 with a minimum of 5.2 and a maximum of 11.0.

Again one year EV/EBITDA forward multiples based on I/B/E/S projected 2011 figures may look attractive for some investors. The DAX 30 forward multiple is 6.6 and EV/EBITDA Prime All Share is 5.9. These values are lower than the historical average since 2008: For the DAX 30 this average was 7.3 with a minimum of 5.0 and a maximum of 10.5. For the Prime All Share this average was 6.7 with a minimum of 4.5 and a maximum of 9.8.

As for EV/EBITDA we see lower one year forward multiples based on I/B/E/S projected 2011 figures than based on 2010 realized ones. Analysts' consensus obviously sees 2011 EBITDA still above the 2010 figures. Beneficially exceptions are Construction and again Utility. The latter industry has a trailing multiple of 5.1 while the forward multiple is at 6.1. An optimistic view based on 2011 compared to 2010 figures display Industrial, Retail, and Technology: here forward 2011 multiples are more than 25% below the trailing multiple.

## Prime All Share Industries, DAX 30, TecDAX 30, MDAX 50: EV/EBITDA

as at 15.10.2011

Source: Datastream

	Trailing EV/EBITDA				1 YR Forward EV/EBITDA					
	Arithm. mean	Median	Harm. mean	Variance	n	Arithm. mean	Median	Harm. mean	Variance	n
Automobiles	6,7	6,4	6,5	1,8	10	5,4	5,1	5,3	1,2	11
Basic Resources	5,0	5,6	4,6	2,3	5	4,2	4,9	3,6	2,5	5
Chemicals	7,8	7,9	6,8	11,4	10	6,9	6,9	6,0	7,1	11
Construction	6,8	6,6	5,7	7,2	6	6,8	7,2	6,4	3,4	6
Consumer	6,9	6,2	5,7	10,3	14	6,3	5,1	5,4	7,7	18
Food & Beverages	7,9	7,9	7,9		1	7,2	7,2	7,2		1
Industrial	7,5	6,9	5,2	15,0	65	5,6	5,5	4,8	3,7	74
Media	5,9	6,1	1,8	17,2	9	5,4	5,5	1,7	11,6	8
Pharma & Healthcare	7,3	7,3	6,0	8,0	17	6,7	6,3	5,7	5,1	19
Retail	6,6	5,4	5,7	12,1	9	5,1	4,5	4,7	2,4	10
Software	8,3	7,5	0,4	14,9	28	6,7	6,3	0,5	8,9	30
Technology	7,1	6,5	5,3	14,9	14	5,2	4,6	4,1	7,0	20
Telecommunication	5,6	4,6	4,5	9,9	8	4,9	5,0	2,5	6,0	7
Transport. & Logistics	6,4	6,2	6,0	3,1	10	5,3	5,1	5,0	2,3	9
Utilities	5,1	4,7	4,7	3,0	3	6,1	6,5	5,8	2,4	3
<b>Prime All Share</b>	<b>7,1</b>	<b>6,6</b>	<b>2,1</b>	<b>11,8</b>	<b>209</b>	<b>5,9</b>	<b>5,5</b>	<b>2,1</b>	<b>5,4</b>	<b>232</b>
<b>DAX 30</b>	<b>7,2</b>	<b>7,3</b>	<b>6,5</b>	<b>4,4</b>	<b>25</b>	<b>6,6</b>	<b>6,5</b>	<b>6,1</b>	<b>3,6</b>	<b>25</b>
<b>TecDAX 30</b>	<b>7,1</b>	<b>5,8</b>	<b>4,4</b>	<b>22,2</b>	<b>23</b>	<b>6,3</b>	<b>5,6</b>	<b>4,5</b>	<b>10,7</b>	<b>26</b>
<b>MDAX 50</b>	<b>8,0</b>	<b>7,3</b>	<b>7,0</b>	<b>9,4</b>	<b>42</b>	<b>6,5</b>	<b>6,3</b>	<b>6,0</b>	<b>3,9</b>	<b>41</b>

## Development of Multiples EV/EBITDA - Overview

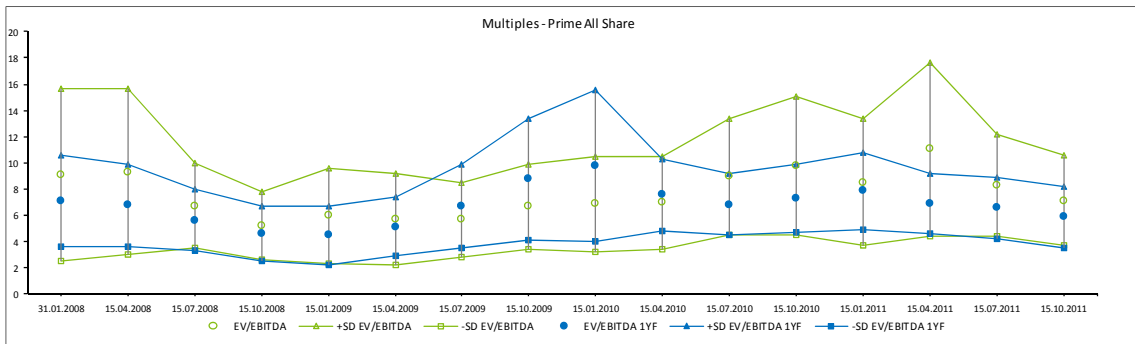


Fig. 19: EV/EBITDA - Prime All Share

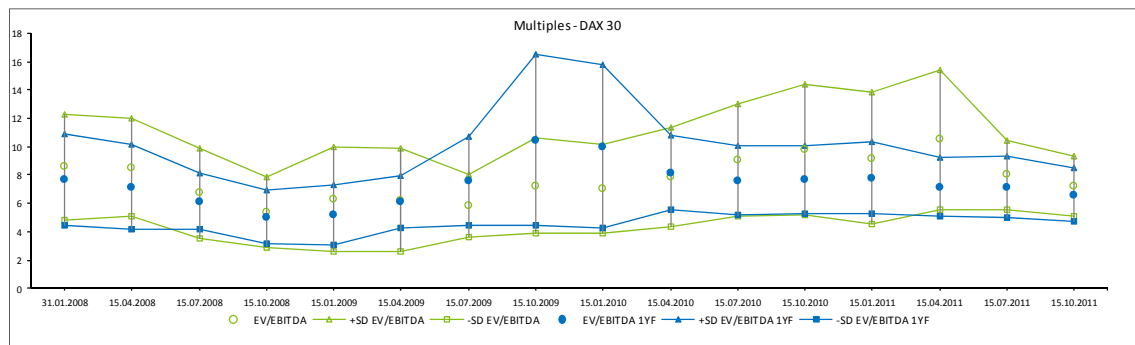


Fig. 20: EV/EBITDA - DAX 30

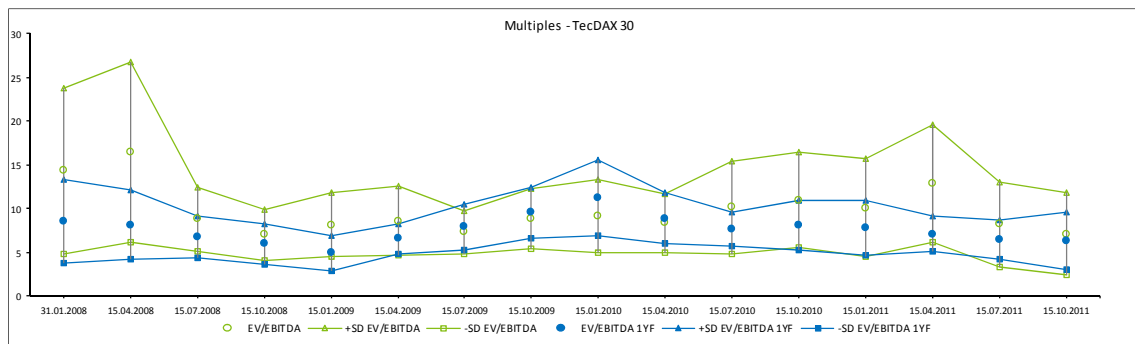


Fig. 21: EV/EBITDA - TecDAX 30

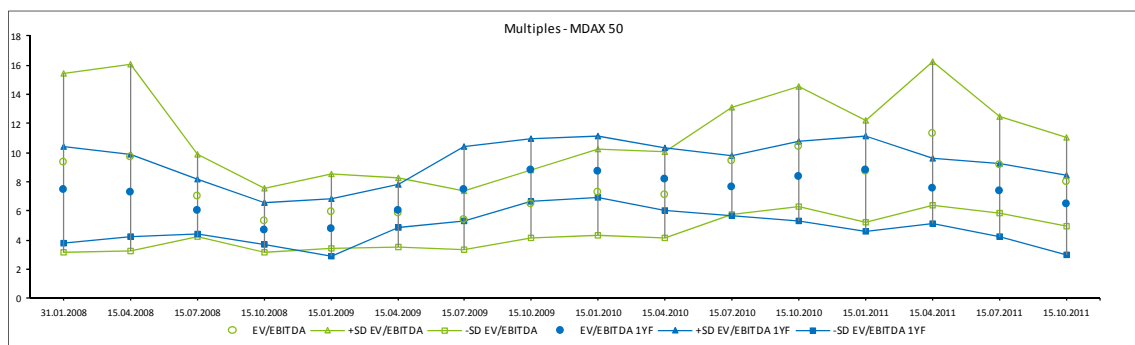


Fig. 22: EV/EBITDA - MDAX 50

## Development of Multiples EV/EBITDA - Per Industry I/II

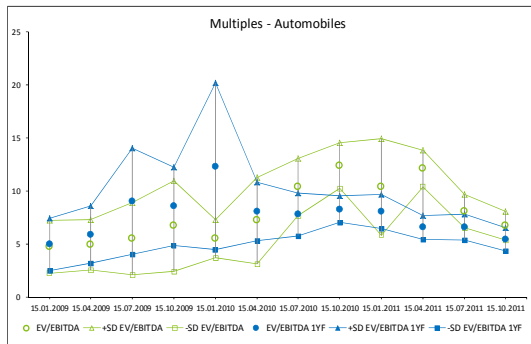


Fig. 23: EV/EBITDA - Automobiles

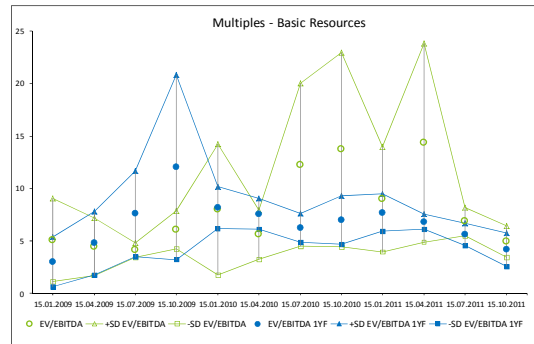


Fig. 24: EV/EBITDA - Basic Resources

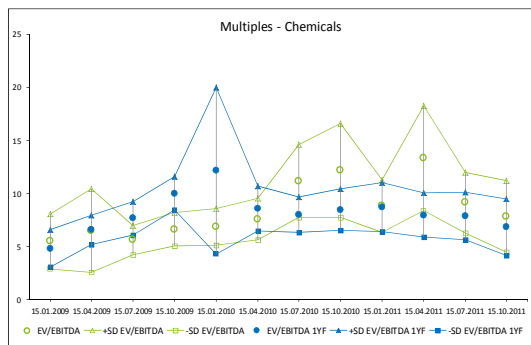


Fig. 25: EV/EBITDA - Chemicals

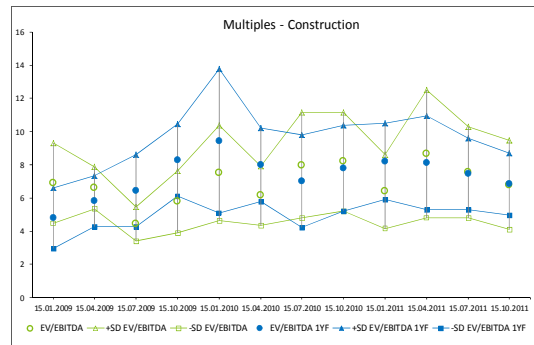


Fig. 26: EV/EBITDA - Construction

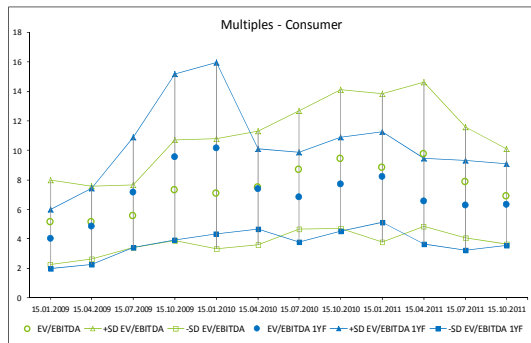


Fig. 27: EV/EBITDA - Consumer

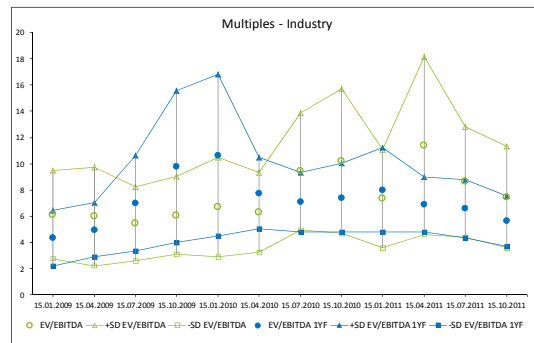


Fig. 28: EV/EBITDA - Industry

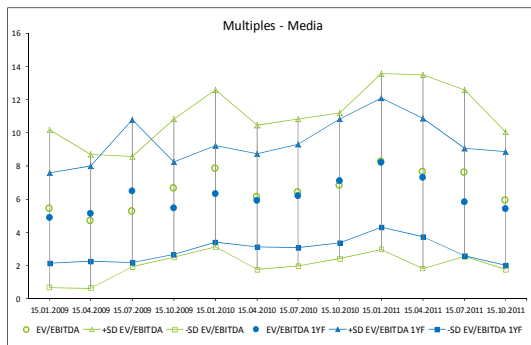


Fig. 29: EV/EBITDA - Media

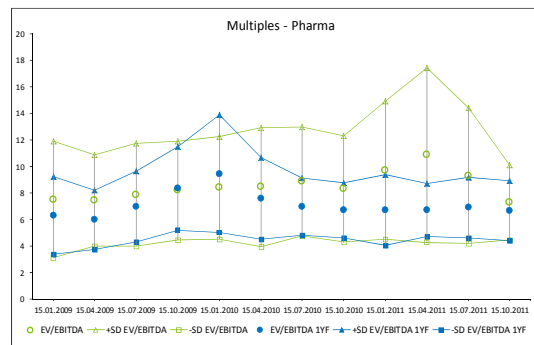


Fig. 30: EV/EBITDA - Pharma

## Development of Multiples EV/EBITDA - Per Industry II/II

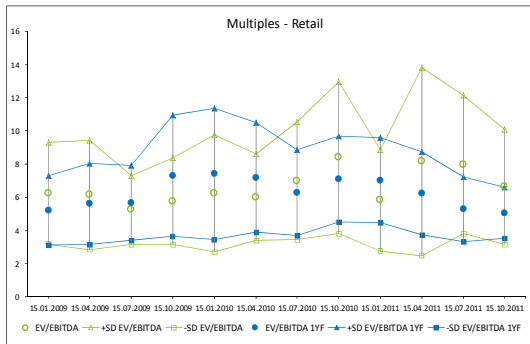


Fig. 31: EV/EBITDA - Retail

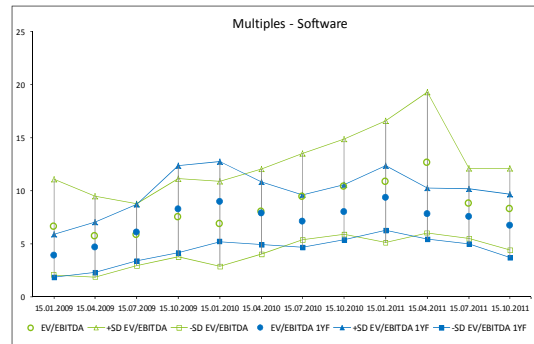


Fig. 32: EV/EBITDA - Software

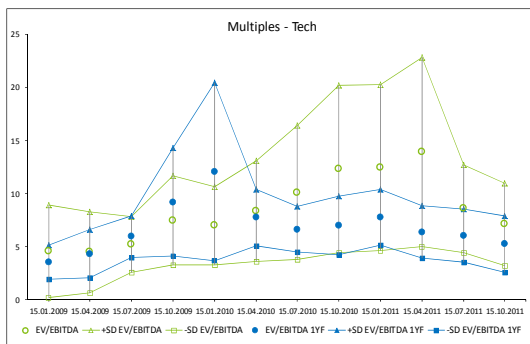


Fig. 33: EV/EBITDA - Tech

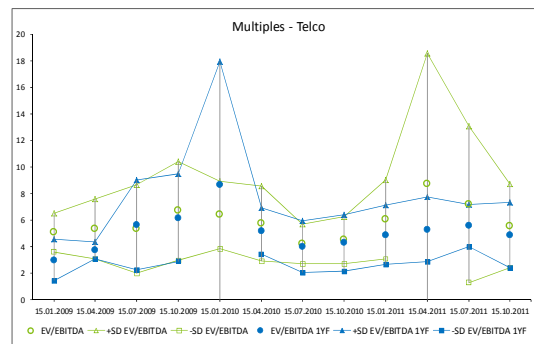


Fig. 34: EV/EBITDA - Telco

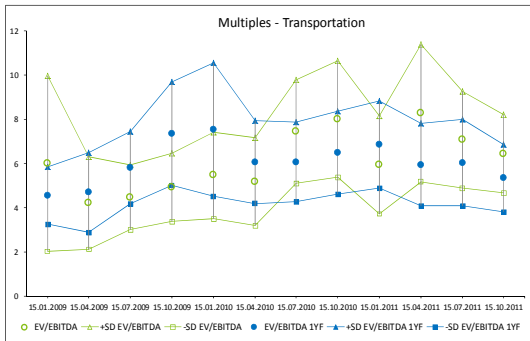


Fig. 35: EV/EBITDA - Transportation

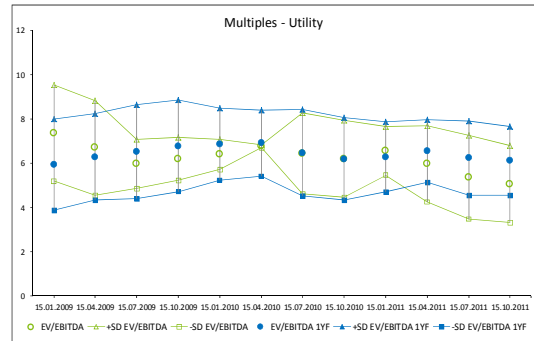


Fig. 36: EV/EBITDA - Utility

## Multiples: P/E

### Executive Summary

- Slight decrease of P/E multiples in most industries and indices
- Forward and trailing multiples slightly below their historical average since 2006
- Optimistic outlook for 2011 Earnings based on forward multiples for almost all industries; Exceptions are Construction, Media and technology.
- Significant positive differences between trailing and forward multiples for Pharma, Telecommunication and Transportation

### Analysis

Price Earnings ratio displayed a slight decrease in most industries and indices compared to July. With realized earnings of 2010 remaining constant the Price/Earnings multiple of DAX 30 dropped from 16.1 to 13.9; the corresponding P/E for Prime All Share dropped from 17.7 to 14.7.

In a historical perspective this is below the average since 2006: For the DAX 30 the average P/E ratio was 16.0 with a minimum of 10.3 and a maximum of 25.3. For the Prime All Share this average was 16.8 with a minimum of 10.0 and a maximum of 23.9.

As in the case of the other multiples one year P/E forward multiples based on I/B/E/S projected 2011 figures may look attractive for some investors, if compared to the historical averages. The P/E DAX 30 forward multiple is 11.0 and the P/E multiple of Prime All Share is 12.8. These values are lower than the historical average since 2006: For DAX 30 this average was 14.1 with a minimum of 8.3 and a maximum of 18.5. For Prime All Share this average was 16.6 with a minimum of 9.1 and a maximum of 24.4.

For most industries we see lower one year forward multiples based on I/B/E/S projected 2011 figures than based on 2010 realized ones. Analysts' consensus obviously sees 2011 earnings still above the 2010 figure. Exceptions are Construction, Media, and Technology where the forward 2011 multiple is more than 25% above the trailing multiple. Very optimistic based on 2011 earnings compared to 2010 look Pharma, Telecommunication, and Transportation where the forward 2011 multiple is around 25% below the trailing multiple.

## Prime All Share Industries, DAX 30, TecDAX 30, MDAX 50: P/E

as at 15.10.2011

Source: Datastream

	Trailing P/E				1 YR Forward P/E					
	Arithm. mean	Median	Harm. mean	Variance	n	Arithm. mean	Median	Harm. mean	Variance	n
Automobiles	10,3	9,3	8,6	20,2	10	8,6	7,5	8,0	7,6	11
Banks	6,7	6,4	4,3	21,7	3	5,6	4,8	5,3	2,3	3
Basic Resources	11,5	12,8	8,5	31,7	6	9,4	9,8	7,6	15,8	6
Chemicals	17,5	13,5	11,7	163,8	11	10,2	9,5	9,5	8,0	10
Construction	11,1	10,3	10,8	4,6	3	15,7	12,8	13,3	55,1	6
Consumer	13,2	14,0	10,3	40,5	15	12,5	13,1	10,7	22,3	17
Financial Services	14,4	12,5	10,6	72,1	27	14,0	13,0	9,8	43,1	26
Food & Beverages	15,3	15,3	15,3		1	13,5	13,5	13,5		1
Industrial	14,2	12,2	10,1	67,7	62	12,4	10,7	10,2	37,6	71
Insurance	10,8	8,1	9,1	35,2	3	11,0	8,7	9,6	27,9	3
Media	11,9	10,5	8,0	73,7	6	13,9	10,7	10,0	85,1	7
Pharma & Healthcare	18,6	17,5	16,2	61,1	21	14,0	13,8	12,2	20,4	21
Retail	16,1	14,7	13,4	52,0	13	13,5	10,1	11,4	49,0	11
Software	17,9	14,2	14,6	87,9	32	14,6	13,4	13,0	28,6	30
Technology	10,7	7,8	7,5	44,0	18	13,5	14,1	11,3	29,9	22
Telecommunication	17,1	11,8	4,5	187,3	6	12,7	12,2	4,4	57,6	6
Transport. & Logistics	15,9	13,4	11,3	85,7	9	11,5	9,0	10,4	15,5	9
Utilities	11,8	12,8	9,6	31,6	3	11,9	13,6	10,6	18,9	3
<b>Prime All Share</b>	<b>14,7</b>	<b>12,5</b>	<b>10,2</b>	<b>71,8</b>	<b>249</b>	<b>12,8</b>	<b>11,5</b>	<b>10,1</b>	<b>33,2</b>	<b>263</b>
<b>DAX 30</b>	<b>13,9</b>	<b>13,2</b>	<b>9,3</b>	<b>61,3</b>	<b>30</b>	<b>11,0</b>	<b>9,7</b>	<b>9,4</b>	<b>19,4</b>	<b>30</b>
<b>TecDAX 30</b>	<b>15,7</b>	<b>13,9</b>	<b>10,8</b>	<b>91,5</b>	<b>25</b>	<b>13,9</b>	<b>12,5</b>	<b>11,0</b>	<b>41,1</b>	<b>26</b>
<b>MDAX 50</b>	<b>16,7</b>	<b>15,3</b>	<b>12,9</b>	<b>78,2</b>	<b>45</b>	<b>13,3</b>	<b>13,1</b>	<b>11,4</b>	<b>32,1</b>	<b>47</b>

## Development of Multiples P/E - Overview

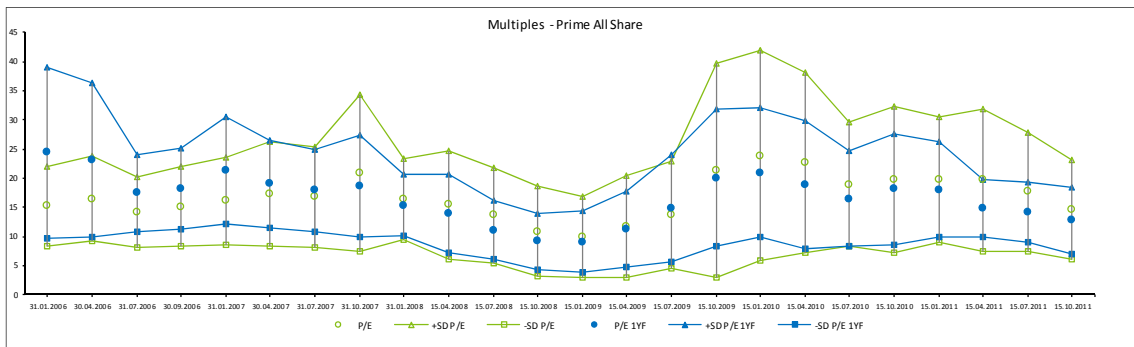


Fig. 37: P/E - Prime All Share

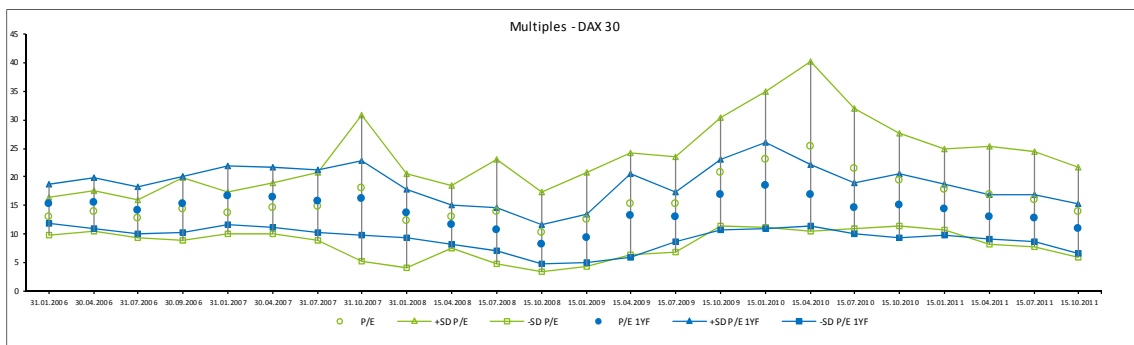


Fig. 38: P/E - DAX 30

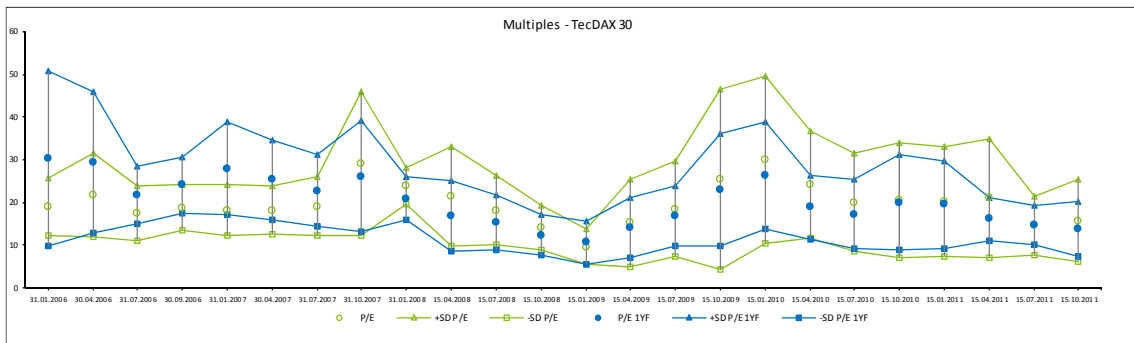


Fig. 39: P/E - TecDAX 30

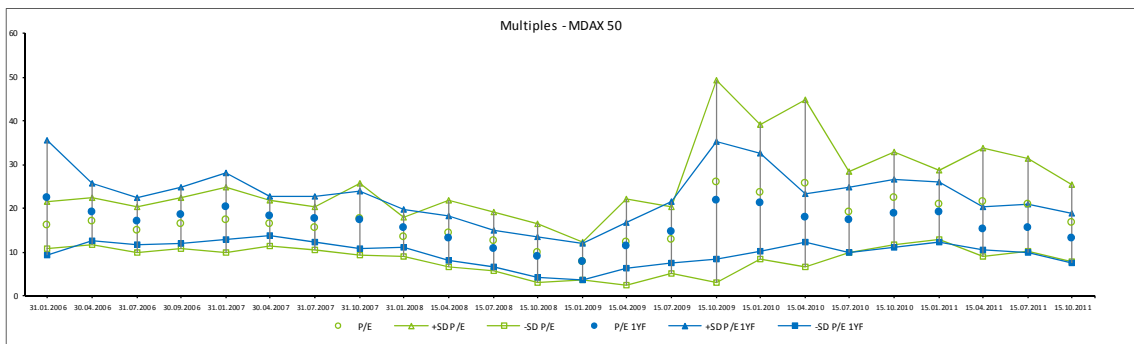


Fig. 40: P/E - MDAX 50



## Development of Multiples P/E - Per Industry I/III

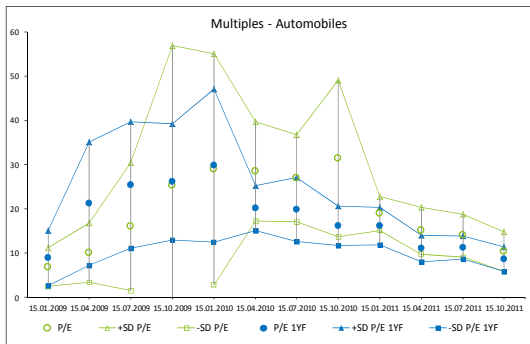


Fig. 41: P/E - Automobiles

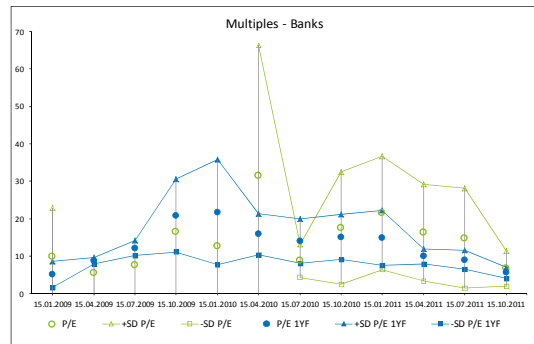


Fig. 42: P/E - Banks

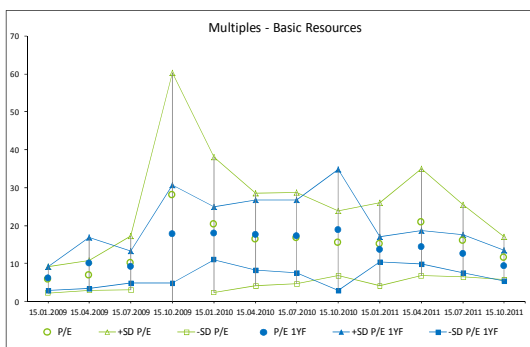


Fig. 43: P/E - Basic Resources

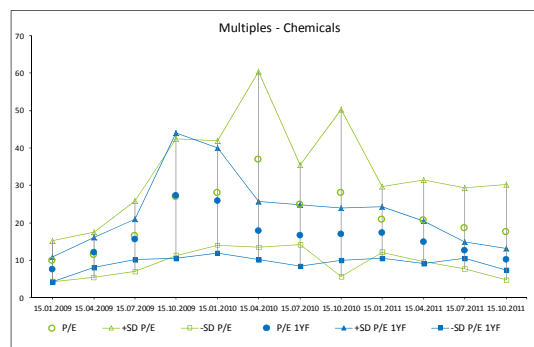


Fig. 44: P/E - Chemicals

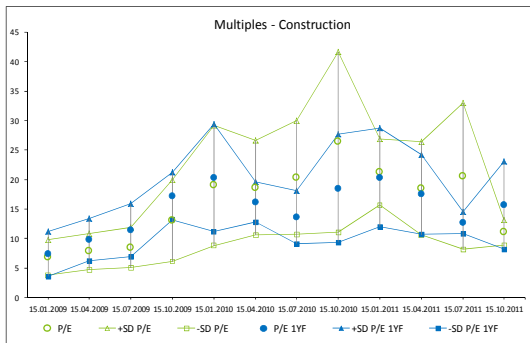


Fig. 45: P/E - Construction

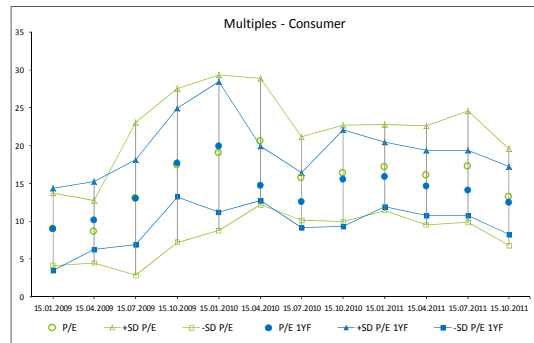


Fig. 46: P/E - Consumer

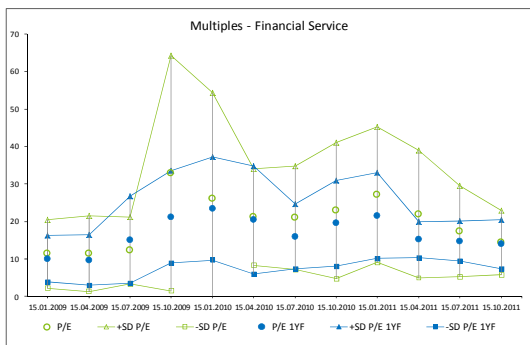


Fig. 47: P/E - Financial Service

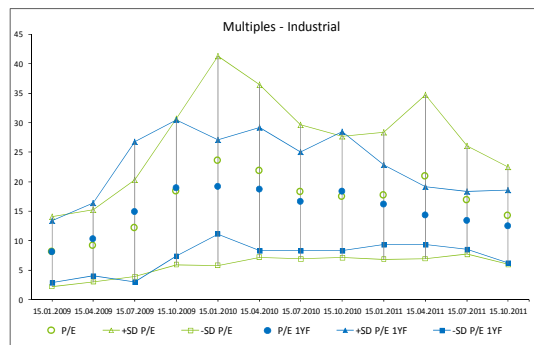


Fig. 48: P/E - Industrial

## Development of Multiples P/E - Per Industry II/III

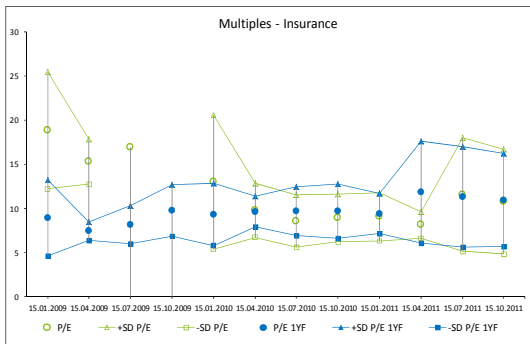


Fig. 49: P/E - Insurance

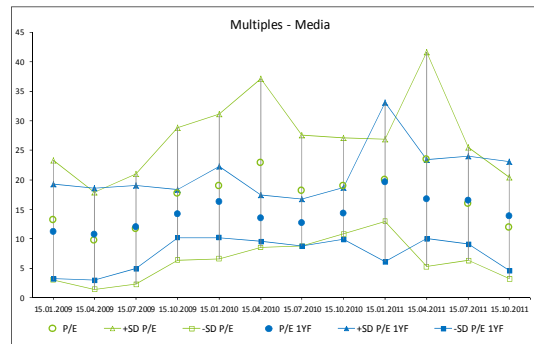


Fig. 50: P/E - Media

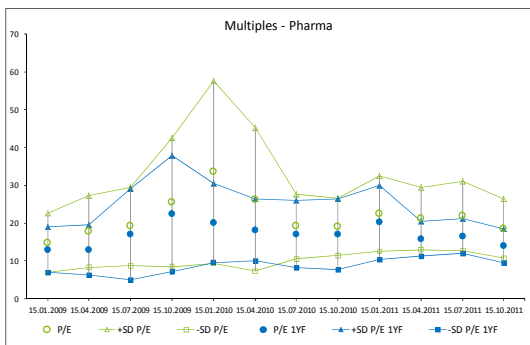


Fig. 51: P/E - Pharma

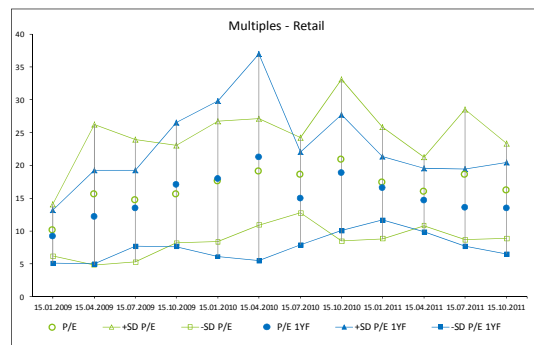


Fig. 52: P/E - Retail

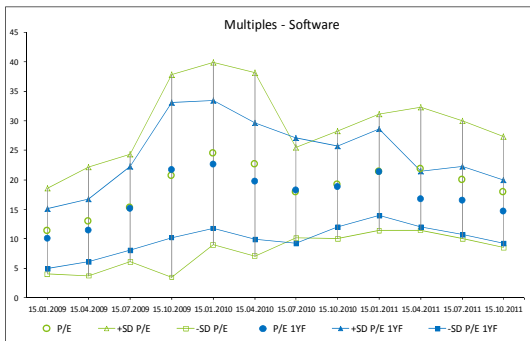


Fig. 53: P/E - Software

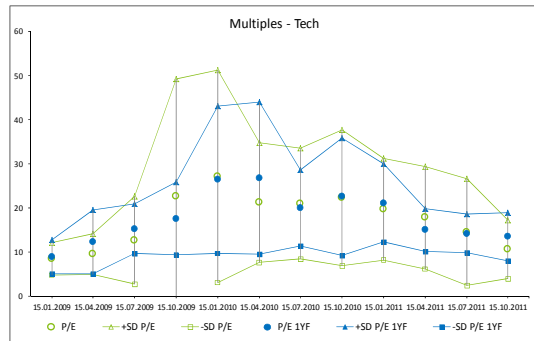


Fig. 54: P/E - Tech

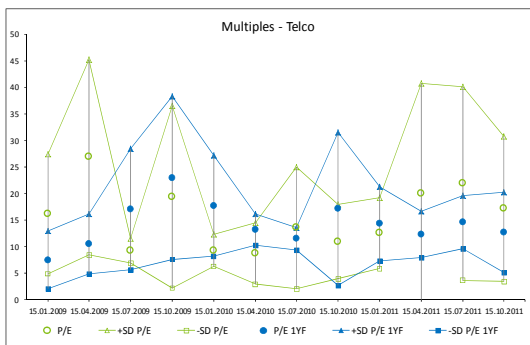


Fig. 55: P/E - Telco

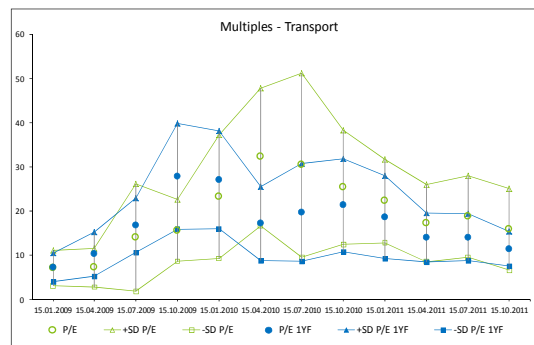


Fig. 56: P/E - Transport

### Development of Multiples P/E - Per Industry III/III

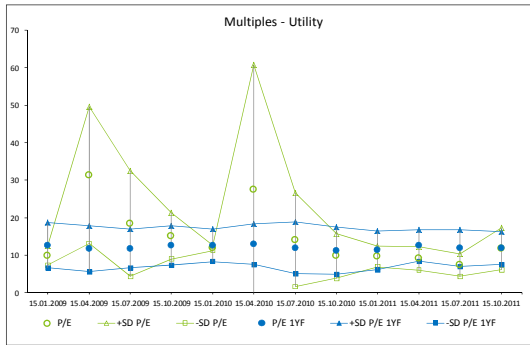


Fig. 57: P/E - Utility

## CAPM Beta Factors

### Executive Summary

- Most industry beta estimates display a stable time pattern
- Latest disruptive event in July - September 2011. This event is not yet fully visualized in 200 day beta

### Analysis

Showing the development of CAPM beta factors we decided to concentrate on 200 day betas and 2 year betas (based on 520 trading days) in one graph. Our analysis addresses two potential concerns of practitioners: reliability and stability of beta estimates. First, recent trends in beta movements can be first observed by looking at the 200 day beta. If the industries „true“ beta changes, it will be first detected by a beta estimate that is less lagged. Second, analysts worry about working with betas that are not stable over time. Therefore we include the 2 year beta into our analysis: The longer the time horizon for estimation, the lower the impact of singularities on the beta estimates.

The latest disruptive event was the decline between end of July until September 2011 with a loss of 30% in the DAX 30 and the Prime All Share. The consequences are not yet fully captured in our estimations as only few observation points are „post-crash“. The last important event fully captured in our observation time is the global financial crisis starting in September 2008. Such market turmoil often leads to shocks in the rolling beta estimate which is due to the strong market movements and changes of historic correlations between assets.

A good example to observe this point is the automobiles industry which was hit hard by the economic slowdown. The 200 day industry beta shows a strong decrease from around 1 to 0.55 in October 2008. Further  $R^2$ , measuring the quality of the estimate, almost vanishes completely thus meaning that our beta estimate is not reliable. Both beta estimates 200 days and 2 years are influenced by this shock. In general a beta between 1 and 1.2 seems to be a very stable and reliable estimate for the automotive industry.

DAX 30, MDAX, and TecDAX are correlated with the Prime All Share for the sake of completeness. While the first two are perfectly correlated to the proxy of the market portfolio the TecDAX is fluctuating around the market beta of 1. Most industry betas show a stable pattern overall or at least in 2011: Automobiles, Chemicals, Consumer, Construction, Insurance, Retail, Telecommunication and Transportation.

### Prime All Share Industries, DAX 30, TecDAX 30, MDAX 50

as at 15.10.2011

Source: Datastream

	Equity beta	R <sup>2</sup>	n	Cost of Equity	Debt - Equity ratio (market values)	Asset beta	Net-Debt - Equity ratio (market values)	operating Asset beta
Automobiles	1,27	0,77	13	9,2%	1,62	0,62	1,25	0,70
Banks	1,34	0,66	3	9,6%				
Basic Resources	1,16	0,71	7	8,6%	0,71	0,79	0,24	1,00
Chemicals	1,01	0,86	12	7,7%	0,39	0,80	0,31	0,84
Construction	1,19	0,79	7	8,7%	1,20	0,67	0,84	0,77
Consumer	0,68	0,62	24	5,9%	0,17	0,61	0,03	0,67
Financial Services	0,70	0,64	42	6,0%				
Food & Beverages	0,52	0,21	1	5,0%	0,59	0,37	0,46	0,40
Industrial	1,00	0,88	92	7,7%	0,51	0,75	0,23	0,88
Insurance	1,15	0,76	3	8,5%				
Media	0,96	0,66	12	7,4%	0,76	0,64	0,64	0,68
Pharma & Healthcare	0,49	0,55	36	4,9%	0,50	0,37	0,38	0,39
Retail	0,78	0,64	20	6,5%	0,58	0,57	0,26	0,67
Software	0,76	0,65	41	6,4%	0,10	0,71	-0,04	0,78
Technology	1,12	0,61	27	8,4%	0,11	1,05	-0,18	1,27
Telecommunication	0,68	0,42	9	6,0%	1,29	0,37	1,21	0,38
Transport. & Logistics	0,93	0,81	11	7,3%	1,20	0,52	0,63	0,66
Utilities	1,08	0,67	4	8,1%	1,14	0,62	0,88	0,69
<b>Prime All Share</b>	<b>1,00</b>	<b>1,00</b>	<b>364</b>	<b>7,7%</b>	<b>0,82</b>	<b>0,65</b>	<b>0,58</b>	<b>0,72</b>
DAX 30	1,02	0,98	30	7,8%	0,90	0,64	0,68	0,71
TecDAX 30	0,85	0,74	30	6,8%	0,32	0,70	-0,04	0,87
MDAX 50	0,98	0,89	50	7,6%	0,57	0,72	0,32	0,81

## Development of CAPM Beta Factors - Overview

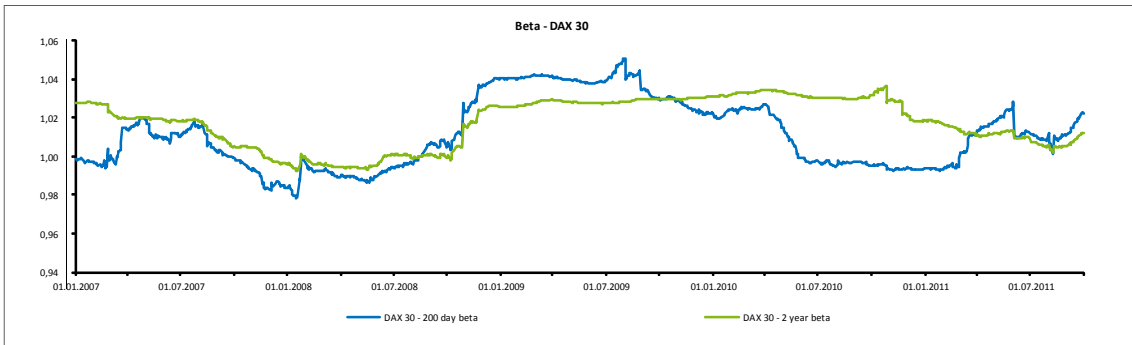


Fig. 58: CAPM Beta - DAX 30

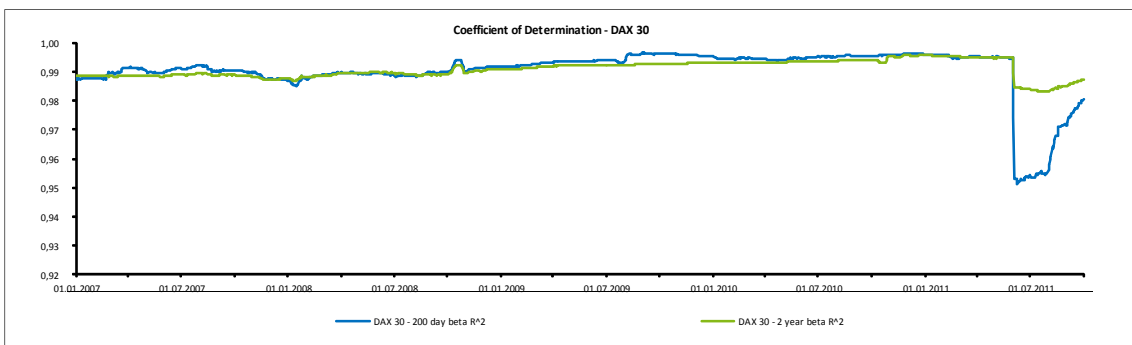


Fig. 59: CAPM R<sup>2</sup> - DAX 30

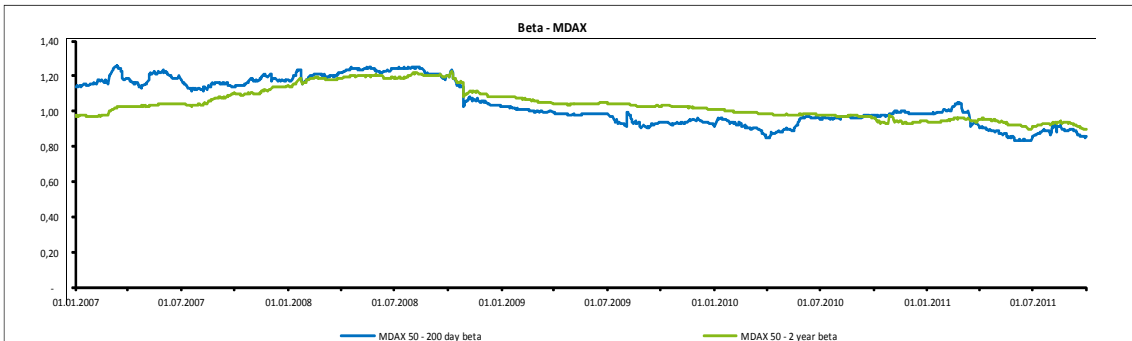


Fig. 60: CAPM Beta - MDAX

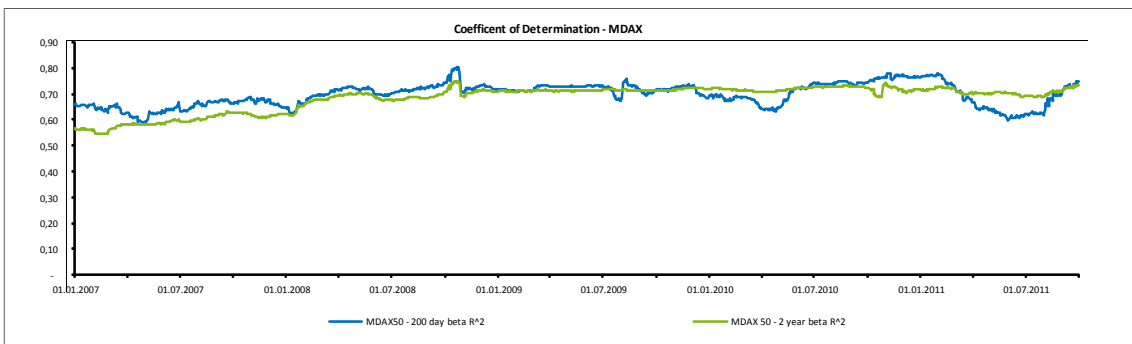


Fig. 61: CAPM R<sup>2</sup> - MDAX

## Development of CAPM Beta Factors - Per Industry I/X

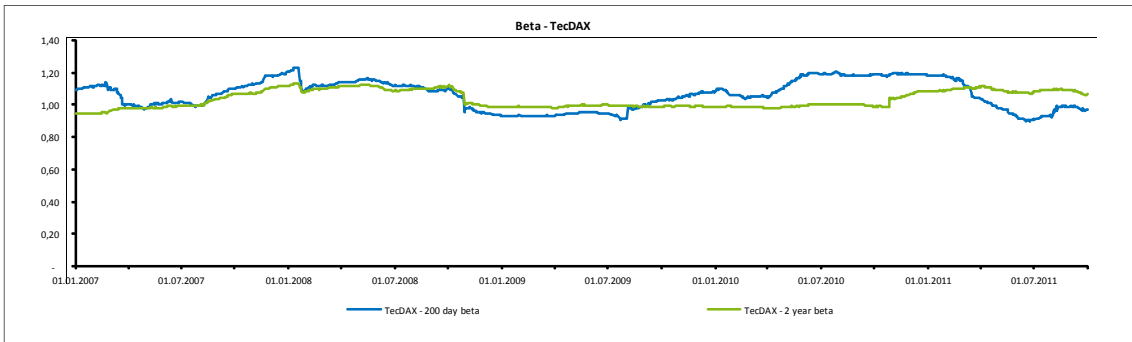


Fig. 62: CAPM Beta - TecDAX

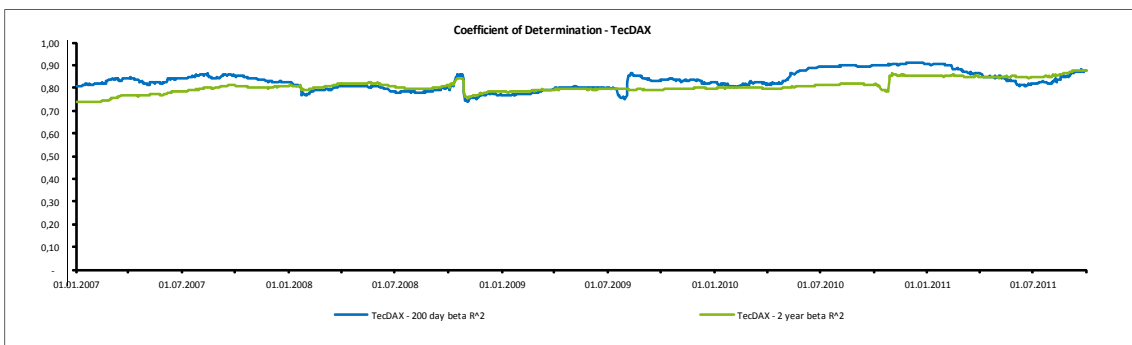


Fig. 63: CAPM R<sup>2</sup> - TecDAX

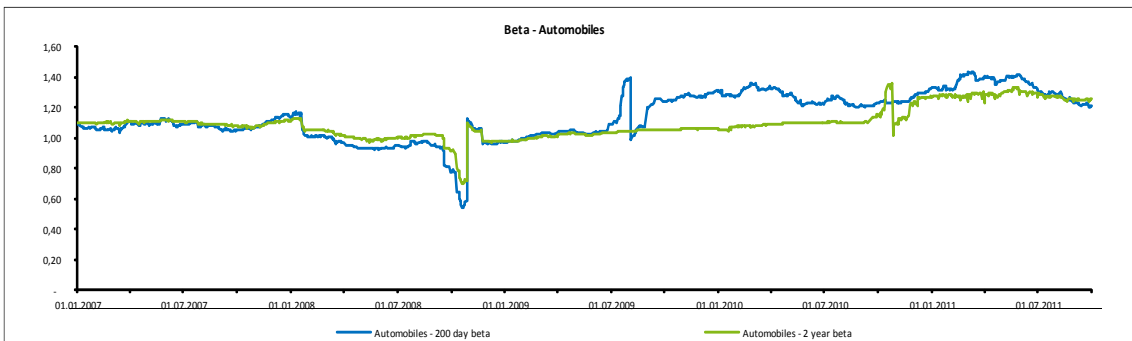


Fig. 64: CAPM Beta - Automobiles

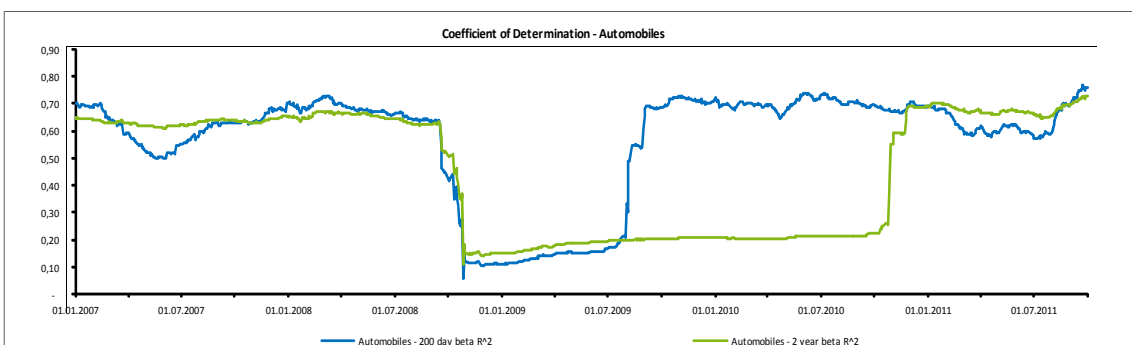


Fig. 65: CAPM R<sup>2</sup> - Automobiles

### Development of CAPM Beta Factors - Per Industry II/X

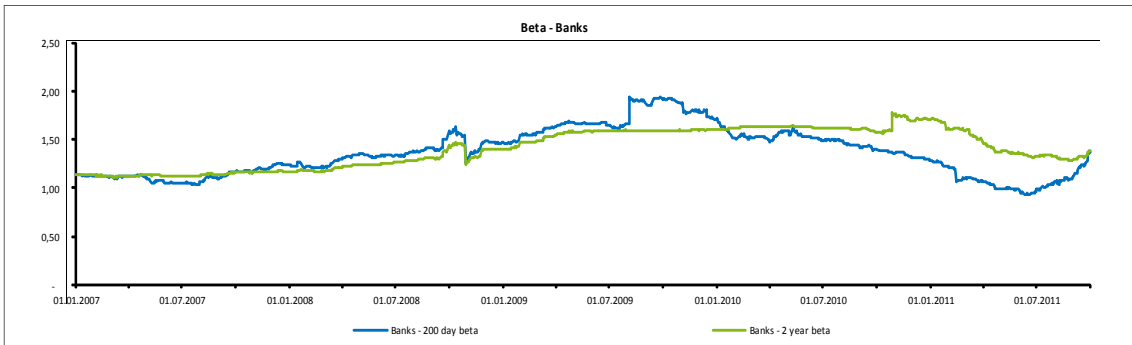


Fig. 66: CAPM Beta - Banks

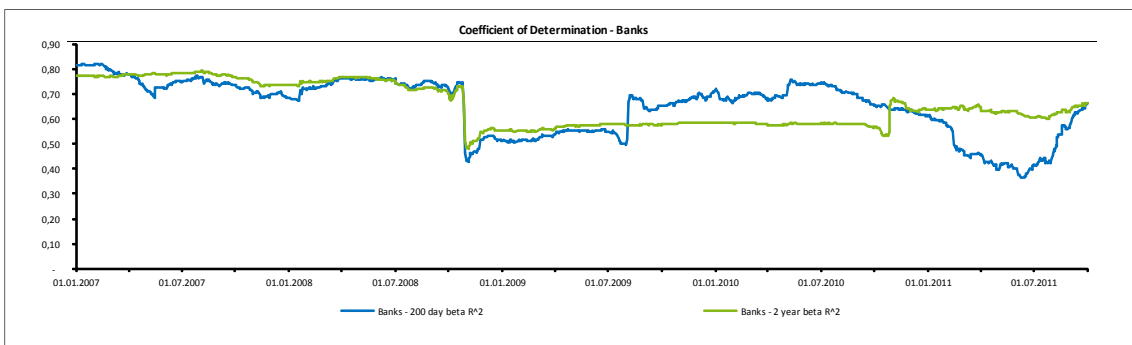


Fig. 67: CAPM R² - Banks

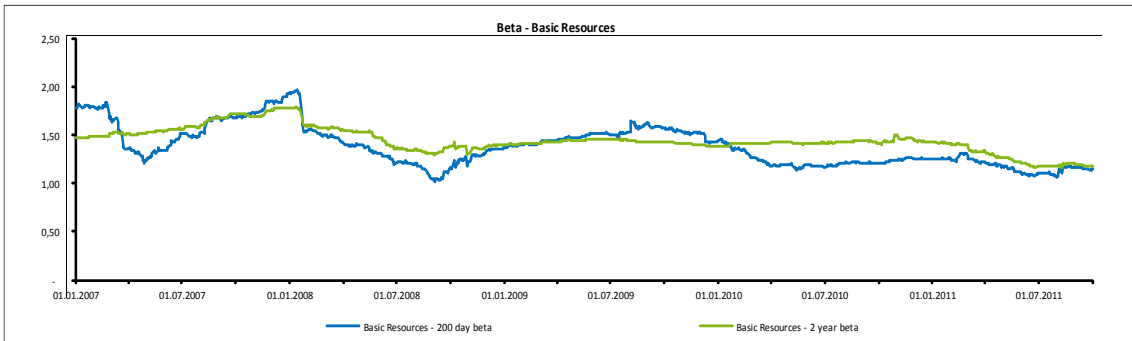


Fig. 68: CAPM Beta - Basic Resources

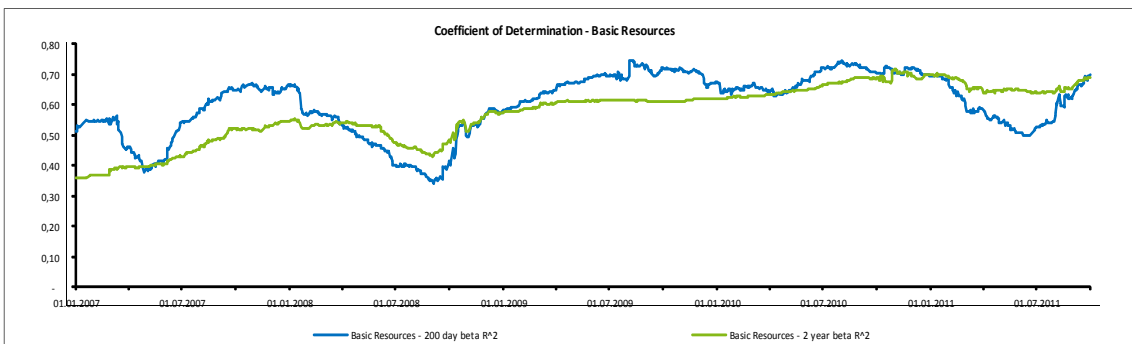


Fig. 69: CAPM R² - Basic Resources



### Development of CAPM Beta Factors - Per Industry III/X

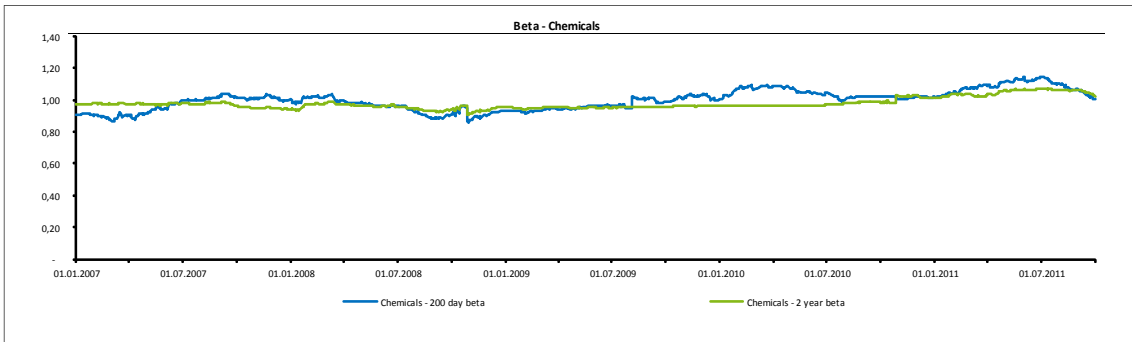


Fig. 70: CAPM Beta - Chemicals

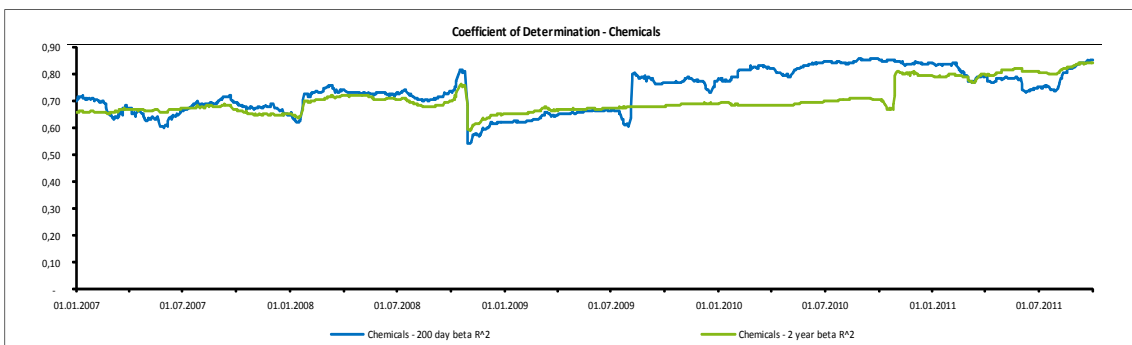


Fig. 71: CAPM R<sup>2</sup> - Chemicals

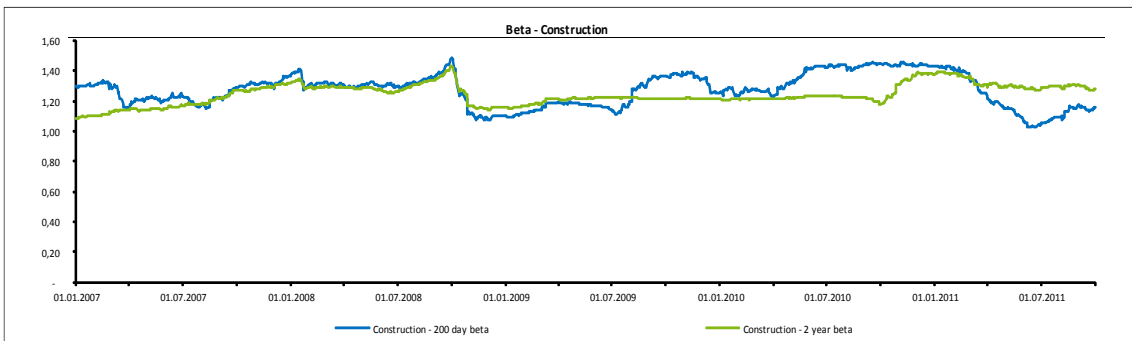


Fig. 72: CAPM Beta - Construction

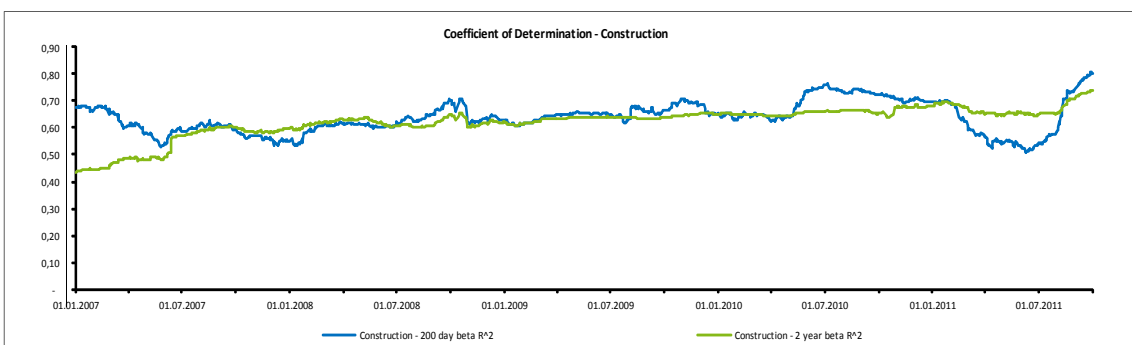


Fig. 73: CAPM R<sup>2</sup> - Construction

## Development of CAPM Beta Factors - Per Industry IV/X

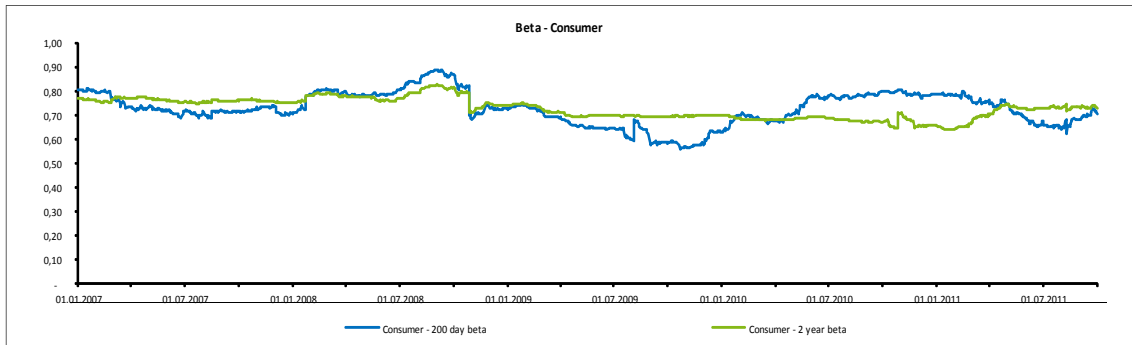


Fig. 74: CAPM Beta - Consumer

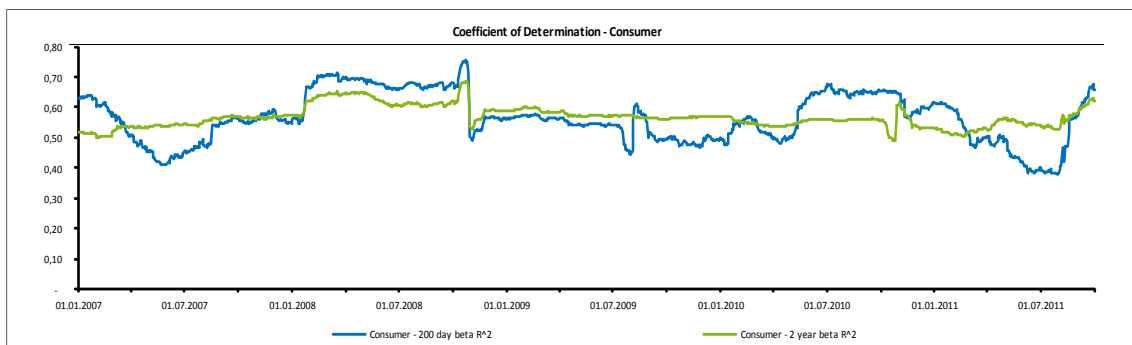


Fig. 75: CAPM R<sup>2</sup> - Consumer

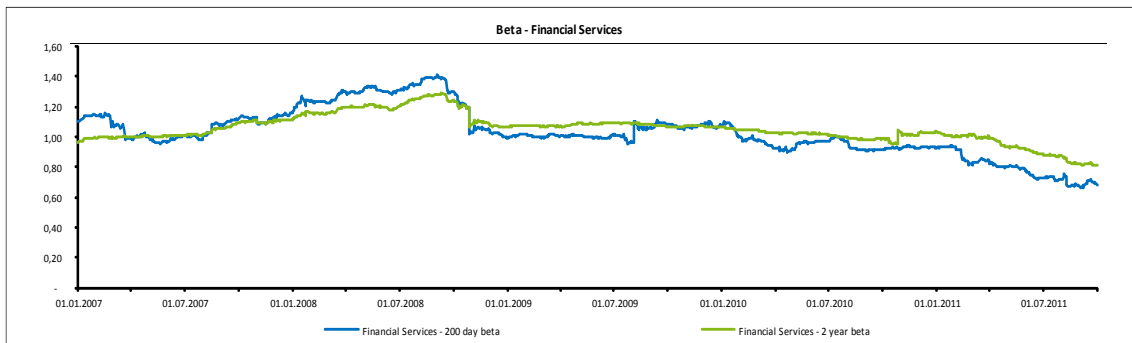


Fig. 76: CAPM Beta - Financial Services

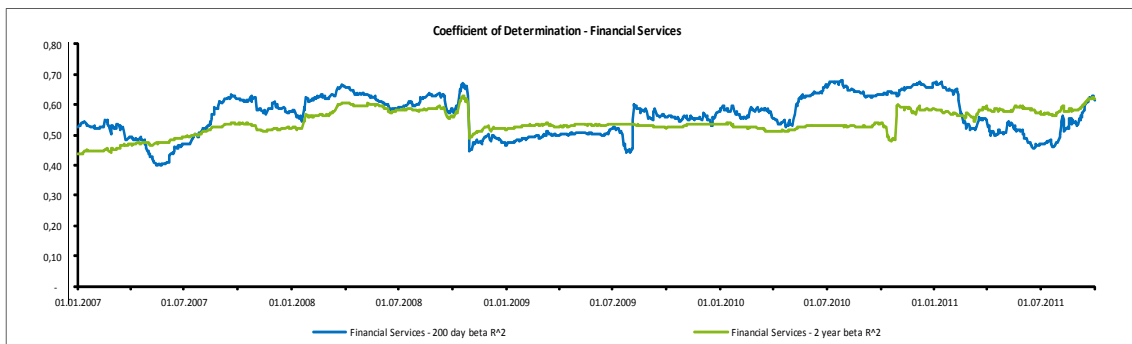


Fig. 77: CAPM R<sup>2</sup> - Financial Services

### Development of CAPM Beta Factors - Per Industry V/X

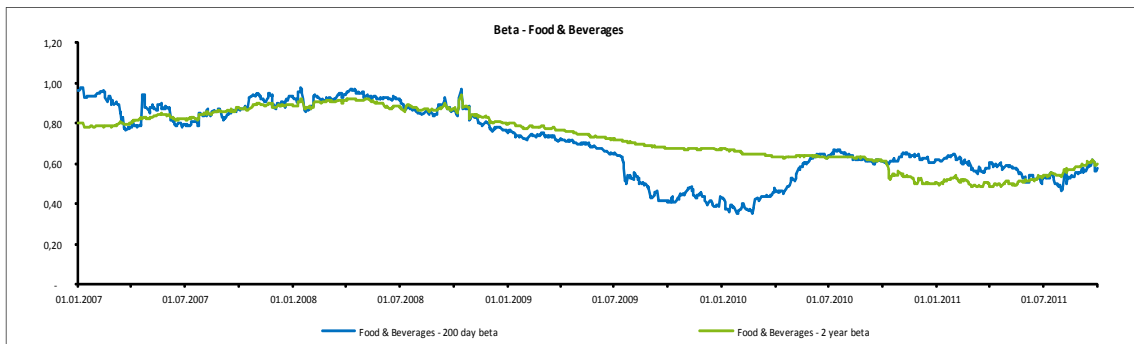


Fig. 78: CAPM Beta - Food & Beverages

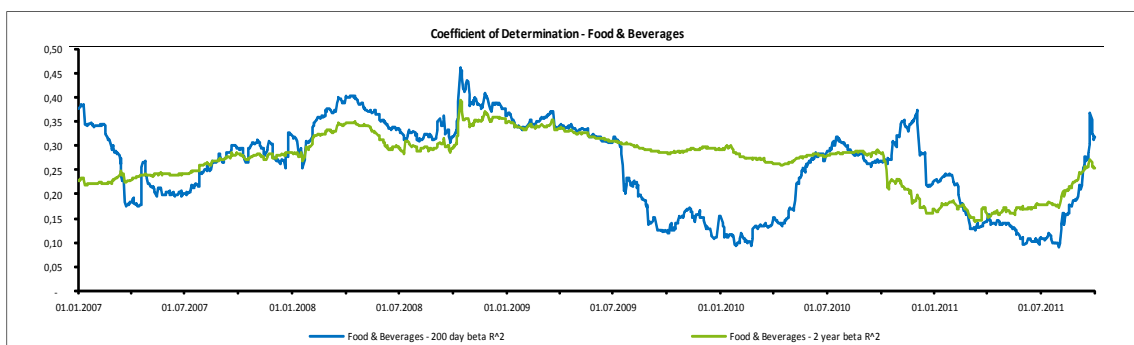


Fig. 79: CAPM R² - Food & Beverages

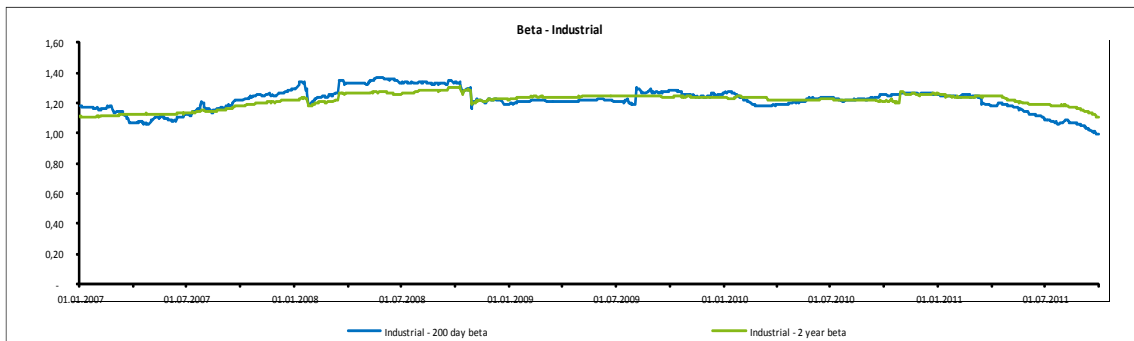


Fig. 80: CAPM Beta - Industrial

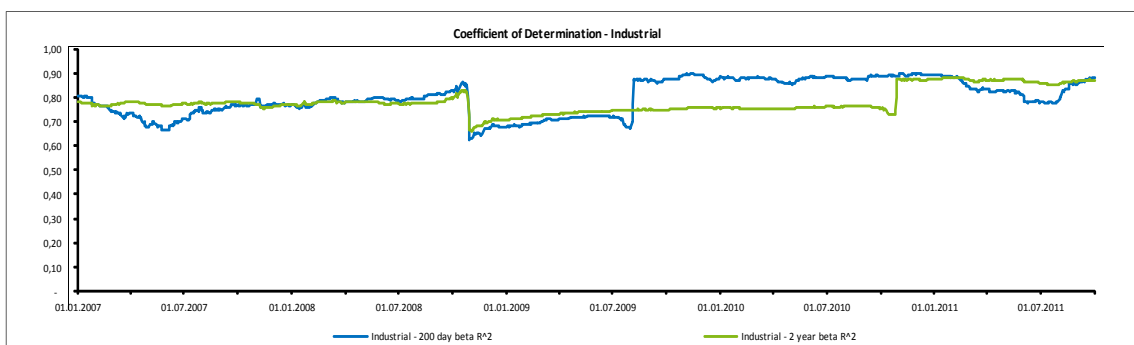


Fig. 81: CAPM R² - Industrial

## Development of CAPM Beta Factors - Per Industry VI/X

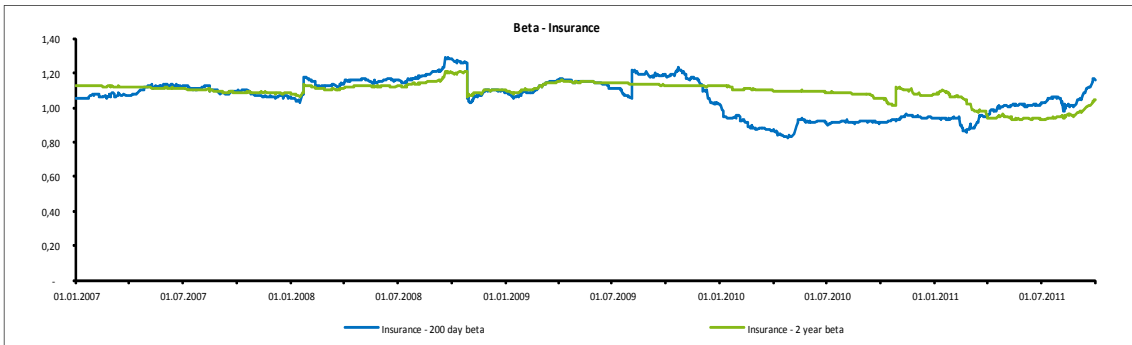


Fig. 82: CAPM Beta - Insurance

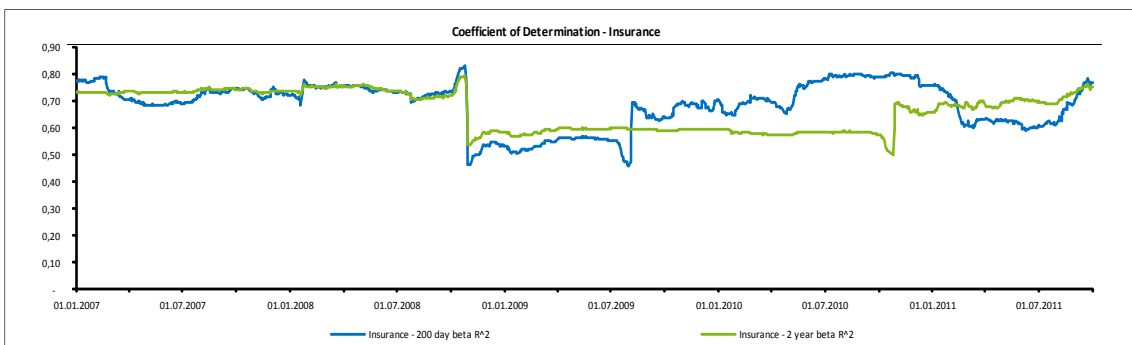


Fig. 83: CAPM R² - Insurance

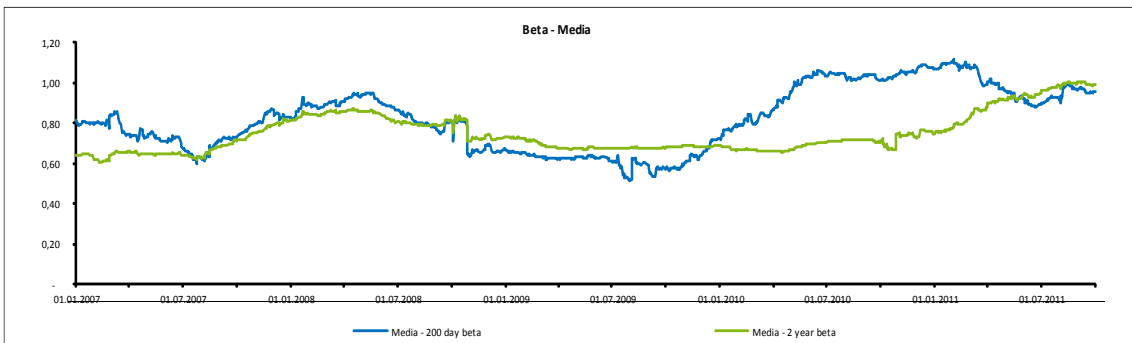


Fig. 84: CAPM Beta - Media

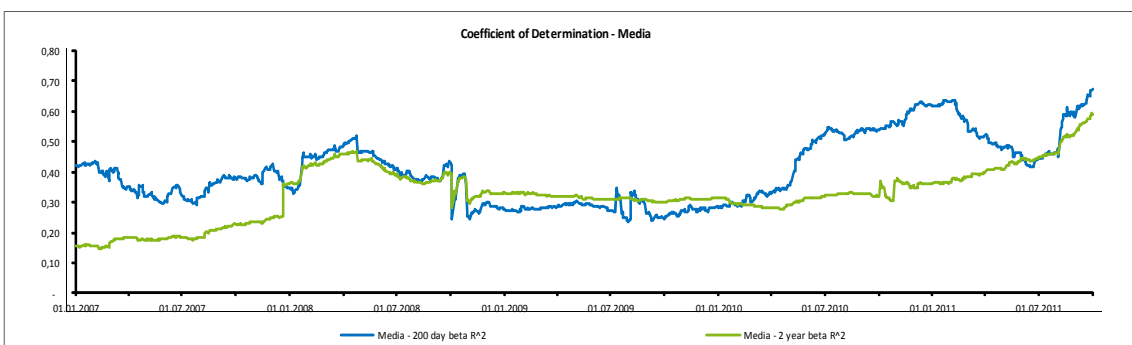


Fig. 85: CAPM R² - Media

## Development of CAPM Beta Factors - Per Industry VII/X

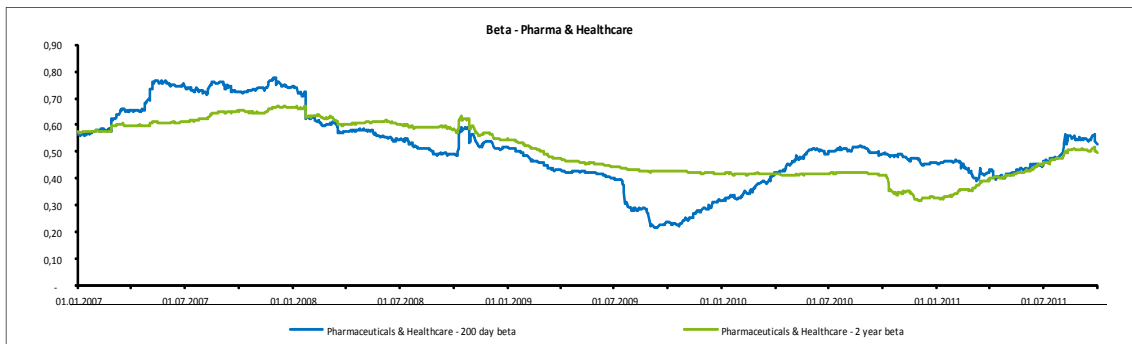


Fig. 86: CAPM Beta - Pharma & Healthcare

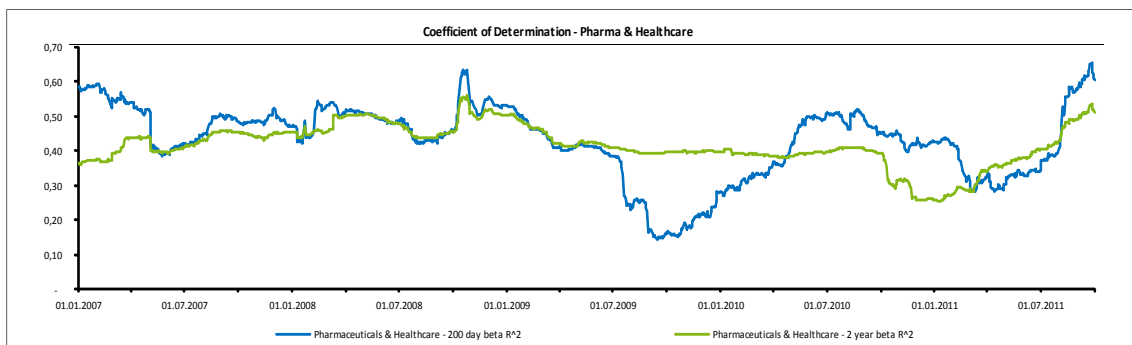


Fig. 87: CAPM R<sup>2</sup> - Pharma & Healthcare

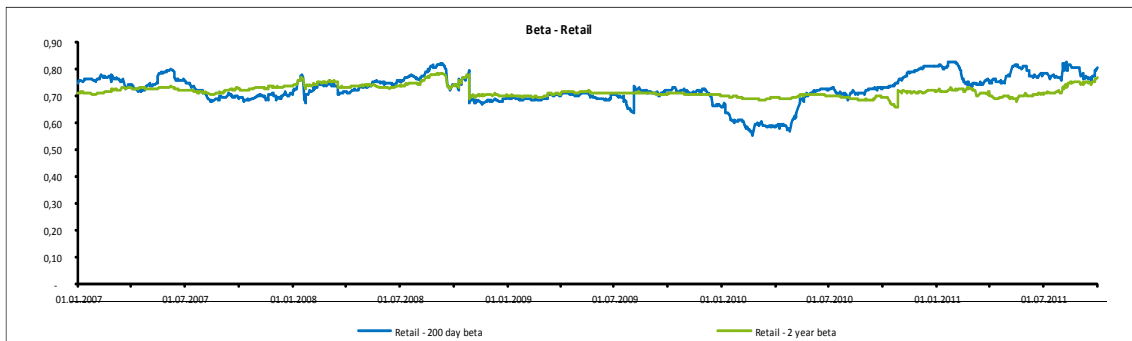


Fig. 88: CAPM Beta - Retail

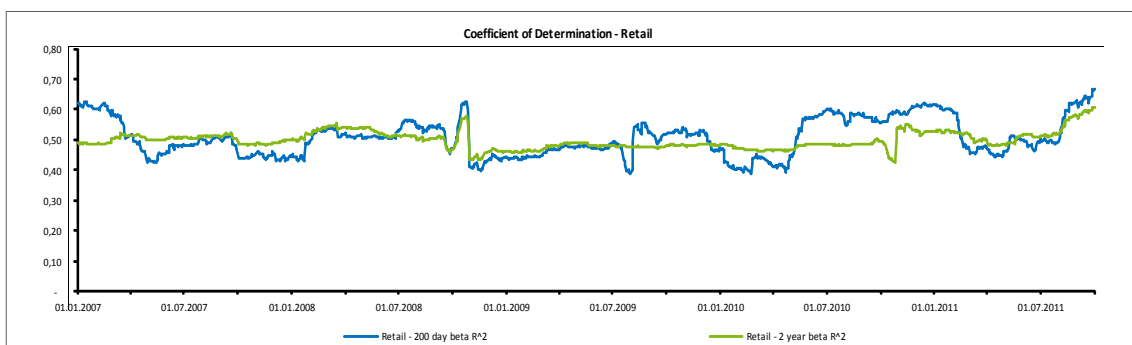


Fig. 89: CAPM R<sup>2</sup> - Retail

## Development of CAPM Beta Factors - Per Industry VIII/X

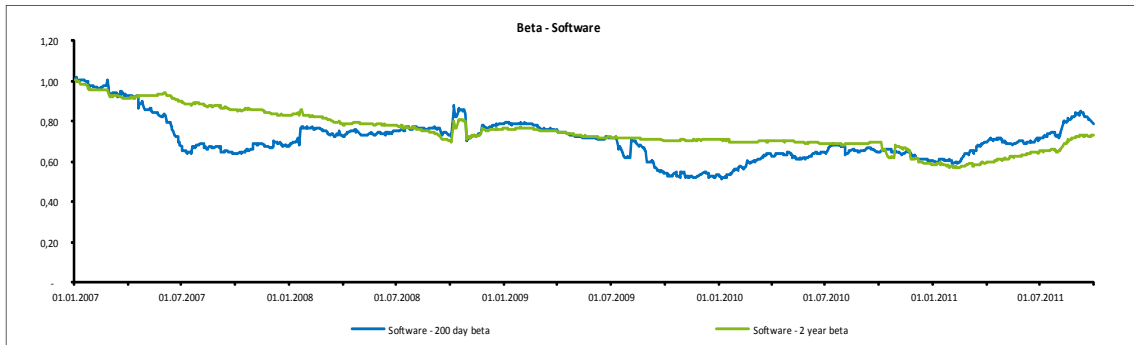


Fig. 90: CAPM Beta - Software

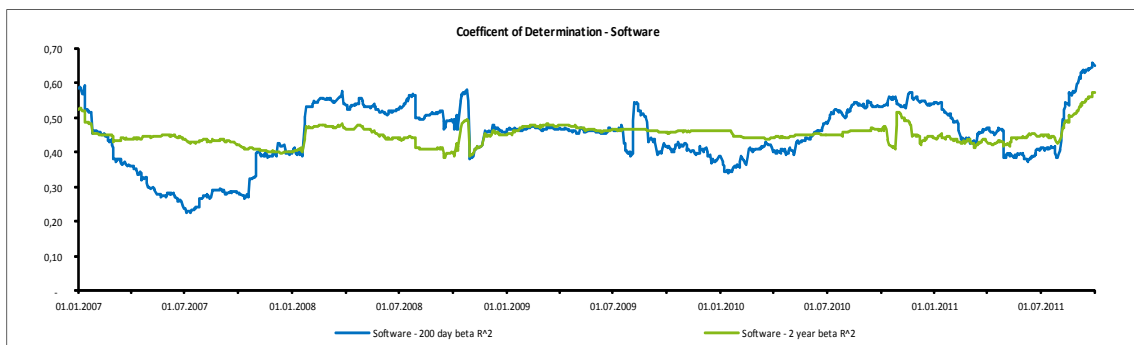


Fig. 91: CAPM R<sup>2</sup> - Software

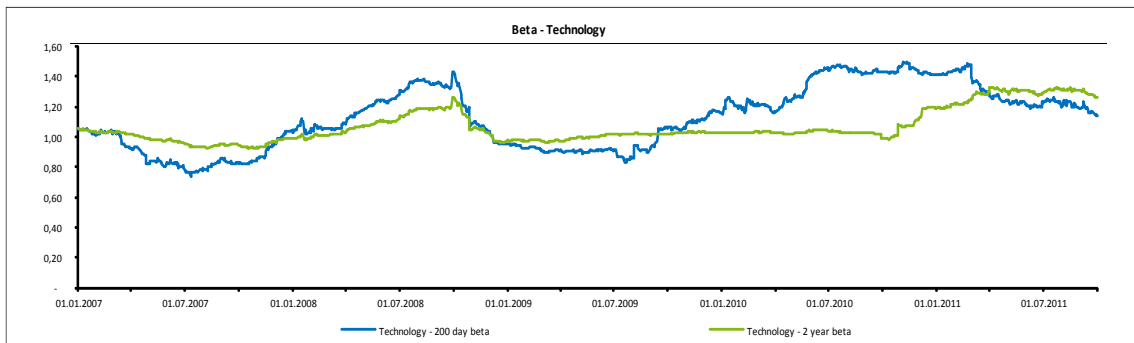


Fig. 92: CAPM Beta - Technology

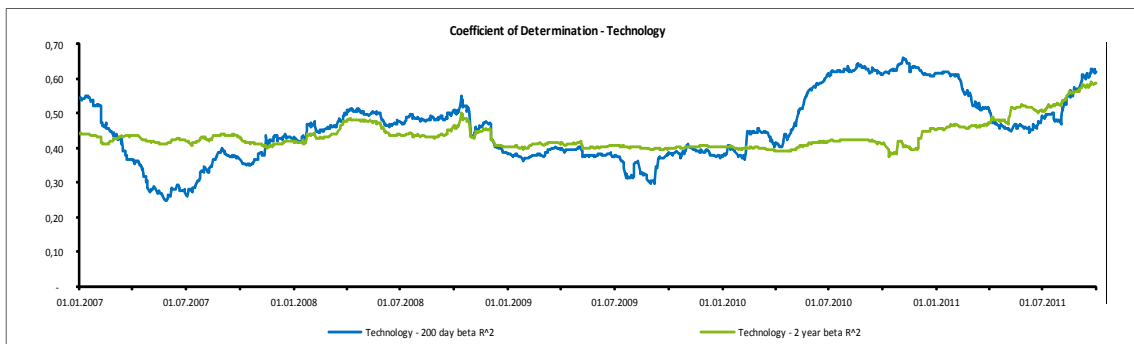


Fig. 93: CAPM R<sup>2</sup> - Technology

## Development of CAPM Beta Factors - Per Industry IX/X

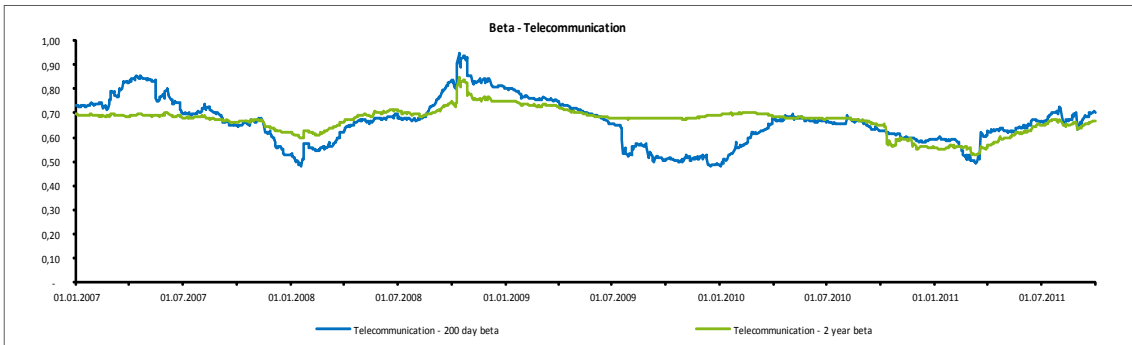


Fig. 94: CAPM Beta - Telecommunication

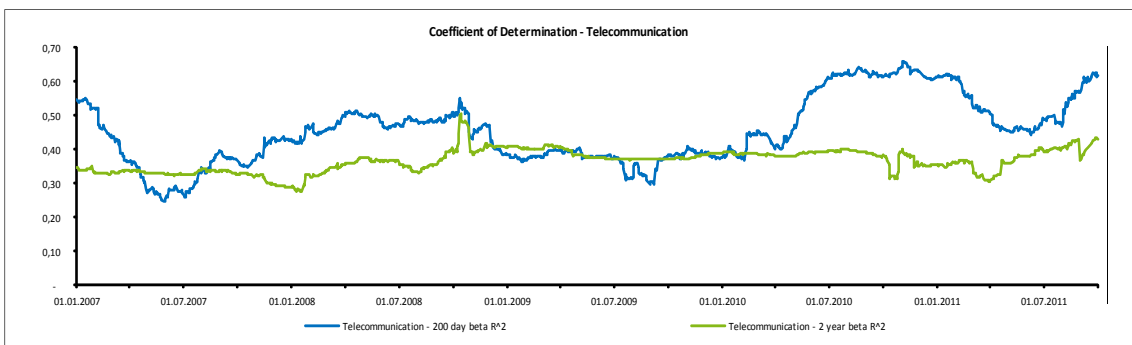


Fig. 95: CAPM R<sup>2</sup> - Telecommunication

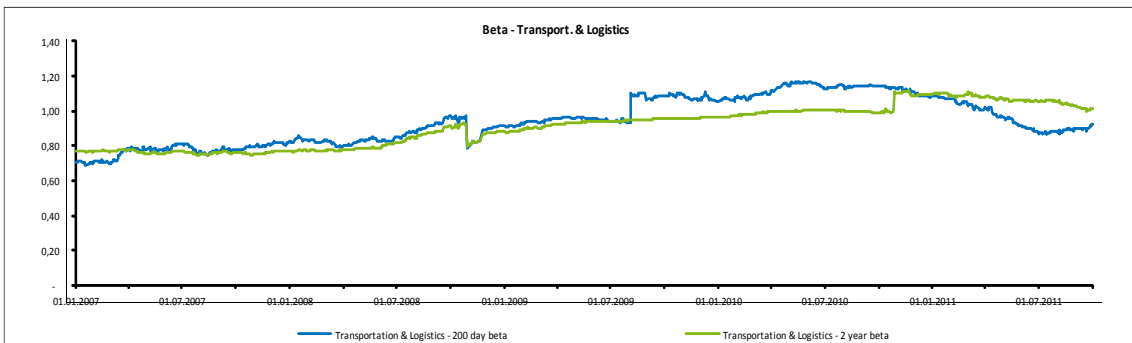


Fig. 96: CAPM Beta - Transport. & Logistics

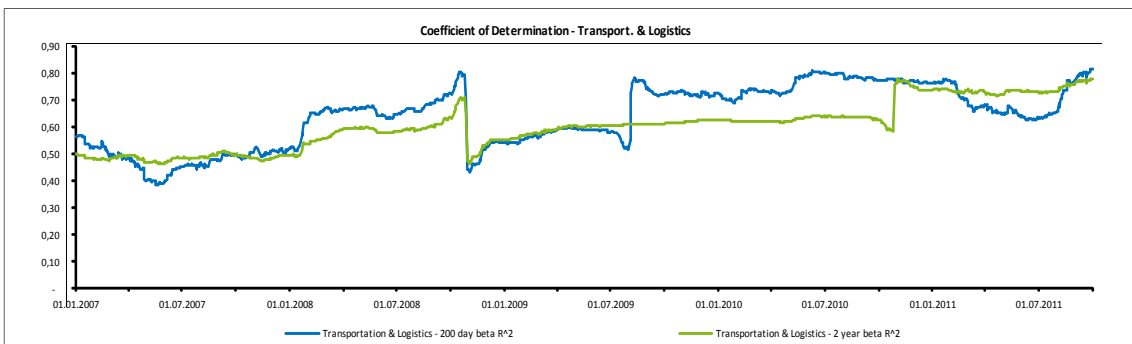


Fig. 97: CAPM R<sup>2</sup> - Transport. & Logistics

### Development of CAPM Beta Factors - Per Industry X/X

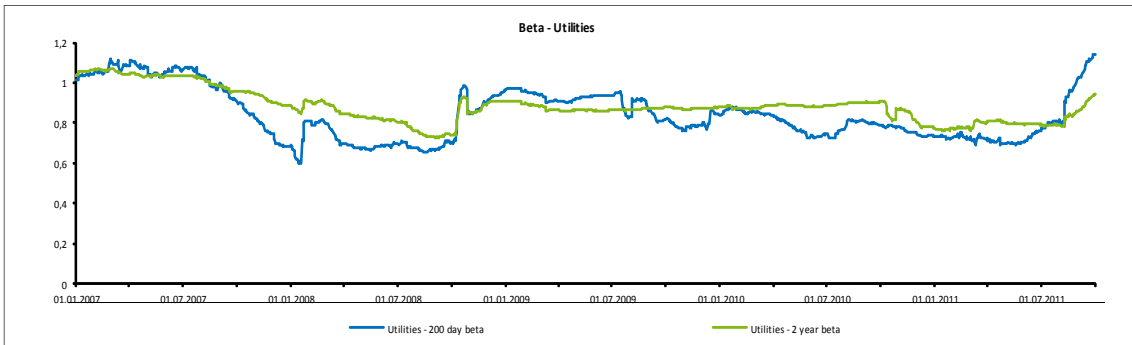


Fig. 98: CAPM Beta - Utilities

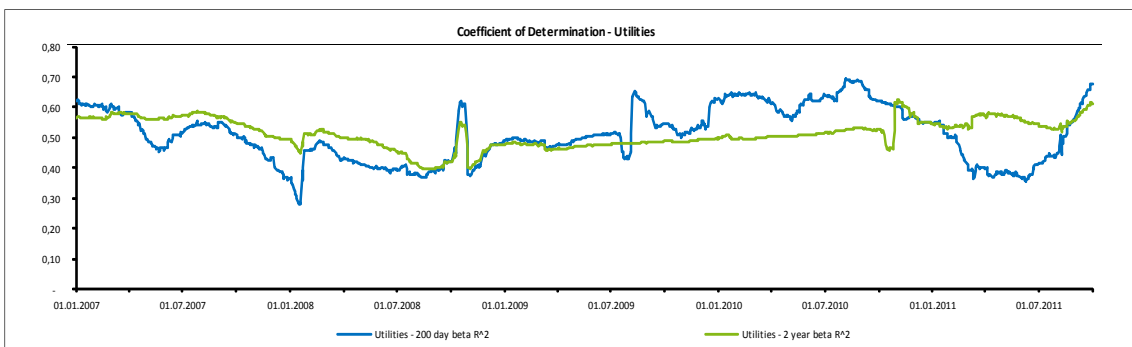


Fig. 99: CAPM R<sup>2</sup> - Utilities



# PECorner - The finexpert Private Equity Newsflash

by Alexander Knauer / Research Associate / Chair of Financial Management

In 2011 so far 50 Private Equity transactions have been completed, the majority of them being smaller transactions with non – disclosed deal values. In the first half of 2011 PE-investors took the advantage of favorable capital market conditions to the exit their investments via an IPO.

League Table: 5 Largest PE-Backed Deals Germany (Q1 - Q3 / 2011)

Date	Target	Type	Size (EUR)	Buyer	Country	Seller	Country	Industry	Notable
Jan '11	Takko Modemarkt	TBO	1.3 bn	Apax Partners	UK	Advent International	US	Textile / Retail	- Advent bought Takko from Permira in Aug '07 - Dual Track Strategy was conducted (IPO vs. TBO-Sale)
Apr '11	Carbon Black	IBO	0.9 bn	Rhone Capital / Triton	US	Evonik	GER	Industrial	- Bidding competition with e.g. Triton Advisers - EBITDA-multiple Deal Value: approx. 6x EBITDA
Jul '11	Jack Wolfskin	TBO	0.7 bn	Blackstone Group	US	Barclays Private Equity / Quadriga	US GER	Textile / Retail	- Blackstones first PE-transaction in Germany since '07 - in 2005 BPE & Quadriga bought JW for EUR 93 mio
Apr '11	SLV Elektronik	SBO	0.5 bn	Cinven Group	UK	Hg Capital Trust	GB	Electronic	- Hg Capital bought SLV Elektronik in July 2007
Apr '11	Dywidag Systems International (DSI)	SBO	0.4 bn	Triton Beteiligungsberatung	D	Creditor (BoA, Merrill Lynch), CVC	UK US	Technology	- CVC bought DSI for > EUR 1 bn in 2007, however lost control due to Debt-Equity Swap (retained minority stake since then)

Source: BvD Zephyr Database / Own Research [IBO- Institutional Buyout; TBO – Tertiary Buyout; SBO – Secondary Buyout]

Notable PE-Exits Germany (Q1 - Q3 / 2011)

Date	Target	Type	Size (EUR)	Buyer	Country	Seller	Country	Industry	Notable
Mar '11	Kabel BW	Trade Sale	3.16 bn	Liberty Global	US	EQT Partners	S	Telecoms	- EQT bought Kabel BW for EUR 1.3 bn EUR from Blackstone in Jun '06; Dual Track Strategy for current
Apr '11	GSW Immobilien	IPO	0.46 bn			Whitehall Funds /	US	Real Estate	- Whitehall / Cerberus bought GSW from the state of Berlin in 2004; First trading day 15.04.2011
Apr '11	Norma Group	IPO	0.39 bn			3i	UK	Industrial	- 3i bought Norma in 2006 - First trading day 08.04.2011
Jun '11	Adler Modemärkte	IPO	0.11 bn			BluoO SICAV-SIF	Lux	Textile / Retail	- BluO bought Adler from Metro in Jan '09 - First trading day 22.06.201
Feb '11	Derby Cycle Werke	IPO	0.09 bn			Finatem Beteiligungs	D	Production	- Finatem bought DC from Raleigh Cycle Ltd in Sep '05 - First trading day 04.02.201

Source: BvD Zephyr Database / Own Research [IPO – Initial Public Offering]

On a global scale some notable Mega-Deals are back, with especially the US dominating these billion-transactions. The current trend of Secondary Buyouts being among the biggest transactions continues – showing the growing importance of this transaction channel.

League Table: 5 Largest PE-Backed Deals Worldwide (Q1 - Q2 / 2011)

Date	Target	Country	Type	Size (EUR)	Buyer	Country	Seller	Country	Industry
Apr '11	Frac Tech Hodings	US	IBO	2.4 bn	Chesapeake Energy Corporation et al.	US			Oil & Gas
Feb '11	Emergency Medical Services	US	Public to	2.4 bn	Clayton Dubilier Rice	US			Healthcare
Jun '11	Securitas Direct	S	SBO	2.3 bn	Bain Capital / Hellmann & Friedman	US	EQT Partners	S	Technology
May '11	Spie SA	F	SBO	2.1 bn	AXA Private Equity, Clayton Dubilier Rice	US F	PAI Partners	F	Industrial
Jun '11	BJ's Wholesale Club, Inc	US	Public to	1.9 bn	CVC Capital / Leonard Green & Partners	GB US			Retail

Source: The Preqin Quarterly Q1 2011 & Q2 2011 / Own Research / BvD Zephyr Database

**PECorner - The finexpert Private Equity News Flash****Did you know?**

In 2010 there have been held 6,908 firms by German PE investors. This represents an increase of 4% compared to the 6,622 portfolio firms in 2008. The total value of the German PE-Portfolio amounted to EUR 35.7 bn and 33.4 bn in 2010 and 2009, respectively. German portfolio firms employ an impressive 1.189 Mio men and women and generate a cumulated turnover of EUR 202 bn – making the PE industry one of the biggest employers in Germany.

Source: Statista / BVK Jahresstatistik 2010

**Hot Topic: The Private Equity Climate**

Based on the BVK/KfW Private Equity Barometer the general business outlook for buyout transactions significantly improved in spring/summer 2011 and reached the level of the boom year 2007. However, according to the Private Equity Panel conducted by CMS Hasche Sigle and FINANCE the availability of debt capital to finance buyout transactions again significantly worsens for the second half of 2011. This is mainly driven by the unstable economic situation, which in turn predicts hard times for PE.

Source: BVK/KfW German Private Equity Barometer 2.Quartal 2011 / CMS Hasche Sigle, press release 17.10.2011

## Current Research: Conglomerates

*by Christin Rudolph / Research Associate / Chair of Financial Management*

My cumulative dissertation is concerned with the puzzle of why conglomerates generally trade at a discount compared to single-segment firms. In summer 2010, I found a very interesting U.S. based research paper by Kuppuswamy/Villalonga (2010)\*, suggesting that the so-called “conglomerate discount” actually decreased in the wake of the 2008/2009 financial crisis. Discussing their article, Prof. Schwetzler and I realized that their finding might vary in case of a different degree of capital market development. Thus we were interested whether these results also hold for the rest of the world (outside the US). In order to answer this question, we extended the analysis of Kuppuswamy and Villalonga (2010) to a global scale, analyzing a sample of more than 65,000 firm-year observations from four world regions, namely developed Asia Pacific, the British Isles, Continental Europe and North America. Are you interested in what we found out? Then check out our full working paper “Conglomerates on the Rise Again? The Worldwide Impact of the 2008-2009 Financial Crisis on the Diversification Discount” under

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1949106](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1949106)

Source: Kuppuswamy/Villalonga (2010), Does diversification create value in the presence of external financing constraints? Evidence from the 2008-2009 financial crisis, Harvard Business School Working Paper