

Figure 51: S&P 500 Intrinsic Valuation Model

S&P 500 Capitalized EPS Valuation		S&P 500 Dividend Discount Model		S&P 500 Long-term EPS & DPS Growth		S&P 500 Cost of Equity & Fair Book Multiple	
Deutsche Bank's 2016E S&P 500 EPS		Deutsche Bank's 2016E S&P 500 DPS		Deutsche Bank's 2016E S&P 500 aggregate ROE		Fair long-term nominal return on S&P 500 index	
	\$118		\$43.00	16.7%	\$720	7.50%	
DB's "normal 2016E" S&P 500 EPS		DB's "normal 2016E" S&P 500 DPS		DB's "normal 2016E" S&P 500 aggregate ROE		Components of estimated fair S&P 500 return:	
	\$125		\$43.00	16.3%		+ Long-term real risk-free interest rate	1.50%
Normal 2016E EPS / 2016E EPS		Normal dividend payout ratio		37%		+ Long-term real S&P 500 equity risk premium*	4.00%
Accounting quality adjustment to pro forma EPS		EPS directed to net share repurchases		\$28.00		= Long-term real S&P 500 cost of equity	5.50%
	-\$10.00	Normal share repurchase payout ratio		24%		+ Long-term inflation forecast	2.00%
Normal 2016E S&P 500 EPS fair to capitalize		S&P 500 intrinsic value at 2016 end		S&P 500 intrinsic value at 2016 end		S&P 500 nominal cost of equity	
Key principle: steady-state value = normal EPS / real CoE		\$115		\$71.00		* S&P 500 ERP usually 300-400bps, w/ real CoE @ 5.5% - 6.5%	
S&P 500 EPS Capitalization Valuation		S&P 500 DPS Discount Model		S&P 500 Long-term EPS & DPS Growth		S&P 500 Cost of Equity & Fair Book Multiple	
Normal EPS / (real CoE - (EM)payout) - EM:		Normal DPS / (nominal CoE - DPS growth):		Sources of long-term earnings growth:		Fair S&P 500 Market Value and Book Value Multiple	
S&P 500 intrinsic value at 2016 start		S&P 500 intrinsic value at 2016 start		+ Long-term inflation forecast		2016 end S&P 500 book value per share	
	2091		2091	+ Fair return on true reinvestment		\$720	
S&P 500 intrinsic value at 2016 end		S&P 500 intrinsic value at 2016 end		+ Value added return on true reinvestment		Fair PB = Fair PE * normal aggregate ROE	
	2205		2205	= Long-term earnings growth		18.2	
Implied fair fwd PE in early 2016 on 2016E \$118 EPS		Implied fair fwd yield on 2016E DPS of \$43.0		+ Growth from net share repurchases		Implied S&P 500 fair value of book at 2016 start	
	17.7		2.06%	= Long-term S&P 500 EPS/DPS growth		2091	
Implied fair trailing PE at 2016 end on 2016E \$118 EPS		Implied fair trailing yield on 2016E DPS of \$43.0		+ Fair normal dividend yield		Steady-state PB = normal agg. ROE / real CoE	
	18.7		1.96%	= Total long-term return at constant PE		Confirmed by fair steady-state PE = 1 / real CoE	
						18.2	
Normal EPS / (real CoE-value added EPS growth)		DPS discount model using true DPS (all payout)		Value added growth premium in fair value est.		Normal 2016E economic profit per share	
	2091		2091	0%		\$73.78	

S&P 500 EPS discount model 5 steps to value:

- 1) Estimate normalized S&P 500 EPS
- 2) Adjust normalized EPS for pro forma accounting quality
- 3) Estimate a fair long-term real return on S&P 500 ownership (CoE)
- 4) Capitalize normalized and accounting quality adj. EPS at real CoE
- 5) Consider long-term potential for value added growth opportunities

Normal 2016E S&P 500 EPS						
		\$118.00	\$122.00	\$125.00 ⁷	\$128.00	\$130.00
Real	5.00%	2267	2353	2417	2481	2524
cost of equity	5.25%	2162	2244	2305	2367	2407
	5.50%	2067	2145	2204	2262	2301
	5.75%	1980	2055	2111	2167	2205
	6.00%	1900	1972	2026	2080	2116

Source: Deutsche Bank

Figure 52: S&P 500 EPS Scenarios

	Foreign Sales %	FX Profits %	A possible acceleration scenario			Moderate oil price rebound			Base case for 2016E S&P EPS No significant oil rebound			Weak global growth and commodities but tight US labor mkt, 1% FF rate 2016 end			Global recession and flat US GDP		
			2015	2016	y/y	2015	2016	y/y	2015	2016	y/y	2015	2016	y/y	2015	2016	y/y
Cons Disc	27%	25%	115.5	128	10.8%	115.5	124	7.4%	115.5	125.5	8.7%	115.5	124	7.4%	115.5	115	-0.4%
Cons Staples	28%	28%	85.5	90	5.3%	85.5	90	5.3%	85.5	90	5.3%	85.5	88	2.9%	85.5	83	-2.9%
Energy	41%	20%	45	50	11.1%	45	25	-44.4%	45	0	-100.0%	45	-10	-122.2%	45	-20	-144.4%
Financials	18%	15%	217	232	6.9%	217	230	6.0%	217	217.5	0.2%	217	232	6.9%	217	210	-3.2%
Health Care	20%	20%	159	170	6.9%	159	170	6.9%	159	170	6.9%	159	165	3.8%	159	158	-0.6%
Industrials	36%	35%	115	122	6.1%	115	118	2.6%	115	120	4.3%	115	110	-4.3%	115	100	-13.0%
Tech	59%	37%	224	245	9.4%	224	240	7.1%	224	237	5.8%	224	230	2.7%	224	215	-4.0%
Materials	49%	40%	30	32	6.7%	30	30	0.0%	30	30	0.0%	30	27	-10.0%	30	23	-23.3%
Telecom	1%	0%	32.5	32.5	0.0%	32.5	32.5	0.0%	32.5	32.5	0.0%	32.5	32	-1.5%	32.5	32	-1.5%
Utilities	6%	6%	33.5	34.5	3.0%	33.5	34.5	3.0%	33.5	34.5	3.0%	33.5	34	1.5%	33.5	34	1.5%
S&P 500 per share	31%	25%	1057	1136	7.5%	1057	1094	3.5%	1057	1057	0.0%	1057	1032	-2.4%	1057	950	-10.1%
			\$118	\$128		\$118	\$123		\$118	\$118		\$118	\$116		\$118	\$107	
Avg oil price			\$51	\$50		\$51	\$40		\$51	\$35		\$51	\$30		\$51	\$25	
Avg Euro			1.11	1.10		1.11	1.05		1.11	1.05		1.11	1.00		1.11	0.95	
Avg FF rate			0.2%	0.75%		0.2%	0.60%		0.2%	0.40%		0.2%	0.85%		0.2%	0.20%	
US UE yr end			5.0%	4.6%		5.0%	4.6%		5.0%	4.6%		5.0%	4.4%		5.0%	6.5%	
US GDP			2.4%	2.5%		2.4%	-2.0%		2.4%	-1.8%		2.4%	-2.0%		2.4%	-0.5%	
Global GDP			3%	-3.2%		3%	-3.2%		3%	-3.2%		3%	2.5%		3%	1.5%	

Source: Deutsche Bank

