

Figure 43: Our 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 2015E S&P 500 EPS	\$119	Deutsche Bank's 2015E S&P 500 DPS	\$41.00	Deutsche Bank's 2015E S&P 500 aggregate ROE	15.9%	Fair long-term nominal return on S&P 500 index	7.50%
		2015E dividend payout ratio	34%	2014 and S&P 500 book value per share	\$750	Components of estimated fair S&P 500 return:	
DB's 'normal 2015E' S&P 500 EPS	\$122	DB's 'normal 2015E' S&P 500 DPS	\$41.00	DB's 'normal 2015E' S&P 500 aggregate ROE	14.7%	+ Long-term real risk free interest rate	1.50%
'Normal 2015E' EPS / 2015E EPS	103%	Normal dividend payout ratio	37%			+ Long-term fair S&P 500 equity risk premium*	4.00%
				S&P 500 EPS retained for true reinvestment	39%	= Long-term real S&P 500 cost of equity	5.50%
Accounting quality adjustment to pro forma EPS	-\$12.00	EPS directed to net share repurchases	\$26.50	Estimated ROE on reinvested S&P 500 EPS	7.50%	+ Long-term inflation forecast	2.00%
		Normal share repurchase payout ratio	24%	Economic margin (EM) or ROE-CoE	0.00%	= S&P 500 nominal cost of equity	7.50%
Normal 2015E S&P 500 EPS fair to capitalize	\$110	Total payout of S&P 500 EPS	\$67.50	Sources of long-term earnings growth:		* S&P 500 ERP usually 300-400bps, w/ real CoE @ 5.5% - 6.5%	
Key principle: steady-state value = normal EPS / real CoE		Total payout rate	61%	+ Long-term inflation forecast	2.00%	Fair S&P 500 Market Value and Book Value Multiple	
				+ Fair return on true reinvestment	2.13%	2014 and S&P 500 book value per share	\$750
<u>S&P 500 EPS Capitalization Valuation</u>		<u>S&P 500 DPS Discount Model</u>		+ Value added return on true reinvestment	0.00%	Fair PB = Fair PE * normal aggregate ROE	2.67
Normal EPS / (real CoE - (EM)(payout) - EM)		Normal DPS / (nominal CoE - DPS growth)		= Long-term earnings growth	4.13%	Fair PE = (ROE-g) / (real ROE*(real CoE-real g))	18.2
S&P 500 intrinsic value at 2015 start	2000	S&P 500 intrinsic value at 2015 start	2000	+ Growth from net share repurchases	1.33%	Implied S&P 500 fair value of book at 2015 start	2000
S&P 500 intrinsic value at 2015 end	2109	S&P 500 intrinsic value at 2015 end	2109	= Long-term S&P 500 EPS/DPS growth	5.45%	Steady-state PB = normal agg. ROE / real CoE	2.67
Implied fair fwd PE in early 2015 on 2015E \$119 EPS	16.8	Implied fair forward yield on 2015E DPS of \$41.0	2.05%	+ Fair normal dividend yield	2.05%	Confirmed by fair steady-state PE = 1 / real CoE	18.2
Implied fair trailing PE at 2015 end on 2015E \$119 EPS	17.7	Implied fair trailing yield on 2015E DPS of \$41.0	1.84%	= Total shareholder return at constant PE	7.50%		
Normal EPS / (real CoE-value added EPS growth)	2000	DPS discount model using true DPS (all payout)	2000	Value added growth premium in fair value est.	0%	Normal 2015E economic profit per share	\$68.75

Sensitivity matrix of S&P fair value at 2015 yearend to normalized EPS and Real CoE

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 2015E S&P 500 EPS					
		\$118	\$120	\$122 ¹	\$125	\$130	\$135
Real	5.00%	2227	2270	2313	2377	2484	2591
cost of	5.25%	2124	2165	2206	2267	2370	2472
equity	5.50%	2031	2070	2109	2168	2265	2363
	5.75%	1945	1983	2020	2077	2170	2264
	6.00%	1867	1903	1939	1993	2083	2173

Source: Deutsche Bank

