

**S&P 500 Earnings, Valuation,
and the Pandemic**
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Appendix 1

Deriving 12-Month Forward Earnings

Every week, I/B/E/S surveys Wall Street's industry analysts and compiles consensus estimates of revenues and earnings per share for the current year and coming year. The consensus data for the S&P 500 companies are aggregated on a market-capitalization-weighted basis. The data can be used to calculate forward revenues and forward earnings on a weekly and monthly basis. To derive the 12-month forward earnings series for the S&P 500, 24 months of data are needed for each year. For example, during January of the current year, 12-month forward earnings is identical to January's consensus expectations for the current year. One month later, in February of the current year, forward earnings is equal to 11/12 of February's estimate for the current year plus 1/12 of February's estimates for earnings in the coming year.

Month	Current Year's Weight	Next Year's Weight
January	12/12	0/12
February	11/12	1/12
March	10/12	2/12
April	9/12	3/12
May	8/12	4/12
June	7/12	5/12
July	6/12	6/12
August	5/12	7/12
September	4/12	8/12
October	3/12	9/12
November	2/12	10/12
December	1/12	11/12

This method of calculating forward earnings doesn't exactly jibe with actual expectations for the coming 12 months, which do not exist empirically in any event. For example, half of forward earnings in July reflects half of the earnings expected for the current year, which is already half over. Furthermore, in this case, the other half of forward earnings reflects half of earnings expectations for all of next year. The problem is that there are no data available from analysts for the next 12 months. The method used by I/B/E/S is a useful approximation.
