

### TrainExer33

This is a stock market data set for the United States for 1927-2013 (yearly data). The source of the data is the updated version of the Goyal and Welch (2008)<sup>1</sup> data. The data are available from the website of Prof Amit Goyal, <http://www.hec.unil.ch/agoyal/>, where the updated data through 2013 (which are used in the lecture) are downloadable from <http://www.hec.unil.ch/agoyal/docs/PredictorData2013.xlsx>. Particularly the application in lecture 3.5 follows the aforementioned paper.

The variables are:

- Year
- Index: The S&P500 index
- Dividends: Dividends on the index ("D12" in the Goyal and Welch [GW] file)
- Riskfree: Riskfree rate ("Rfree" in GW)
- LogEqPrem: Log of the equity premium (calculated following GW<sup>2</sup>)
- BookMarket: Book to market ratio ("b/m" in GW)
- NTIS: Equity issued ("ntis" in GW)
- DivPrice: Dividend to price ratio (calculated following GW<sup>3</sup>)
- EarnPrice: Earnings to price ratio (calculated following GW<sup>4</sup>)
- Inflation: Inflation rate ("infl" in GW)

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<sup>1</sup> "A comprehensive look at the empirical performance of equity premium prediction", Review of Financial Studies 21(4), p1455-1508.

<sup>2</sup> Calculated as:  $\log((\text{Index} + \text{D12}) / \text{Index}(-1)) - \log(1 + \text{Rfree})$ , where  $x(-1)$  denotes value from previous period,  $\log$  is the natural logarithm, D12 dividends and Rfree the riskfree rate.

<sup>3</sup> Calculated as:  $\log(\text{D12}) - \log(\text{Index})$ , where D12 are dividends.

<sup>4</sup> Calculated as:  $\log(\text{E12}) / \log(\text{Index})$ , where E12 are earnings.