

Factor Research: pb

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1 Data

1.1 Time period

2000.1.31 – 2020.6.30. The SHARADAR data source has a fixed 20 years window. We regularly download data from there to our local in an accumulation manner so we would go beyond the 20 years limit.

1.2 Universe

We manually re-construct historical SP500 line-up as our universe. So this research by nature is large-cap oriented

1.3 Data preparation

Our fundamental analysis is based on a quarterly rebalance frequency, which also matches the reporting period of companies. Our rebalance dates are the last dates of each quarter. Given the different earning dates of different company, at those dates, some companies latest financial reports may have not come out yet. So directly using the rebalance date as the date for the fundamental information would cause look-forward bias. To address this, at each rebalance date, we use the most recent financial information prior to that date for each companies.

2 Methodology

2.1 Z Score

At each rebalance date, we rank the above-mentioned universe by the relevant column/factor (pb in this case). We take the z-score of the rank. We also group the universe by sector/industry to examine the z score of stocks in each group.

Note as a classical constituent of value factor, a low pb value indicates a more value-styled stock as a high pb means a more growthy stock

2.2 IC

TBA

2.3 L/S Portfolio

TBA

3 Observation

3.1 Z Score

Figure 1 shows the overview of all sectors. We break them down into the following categories:

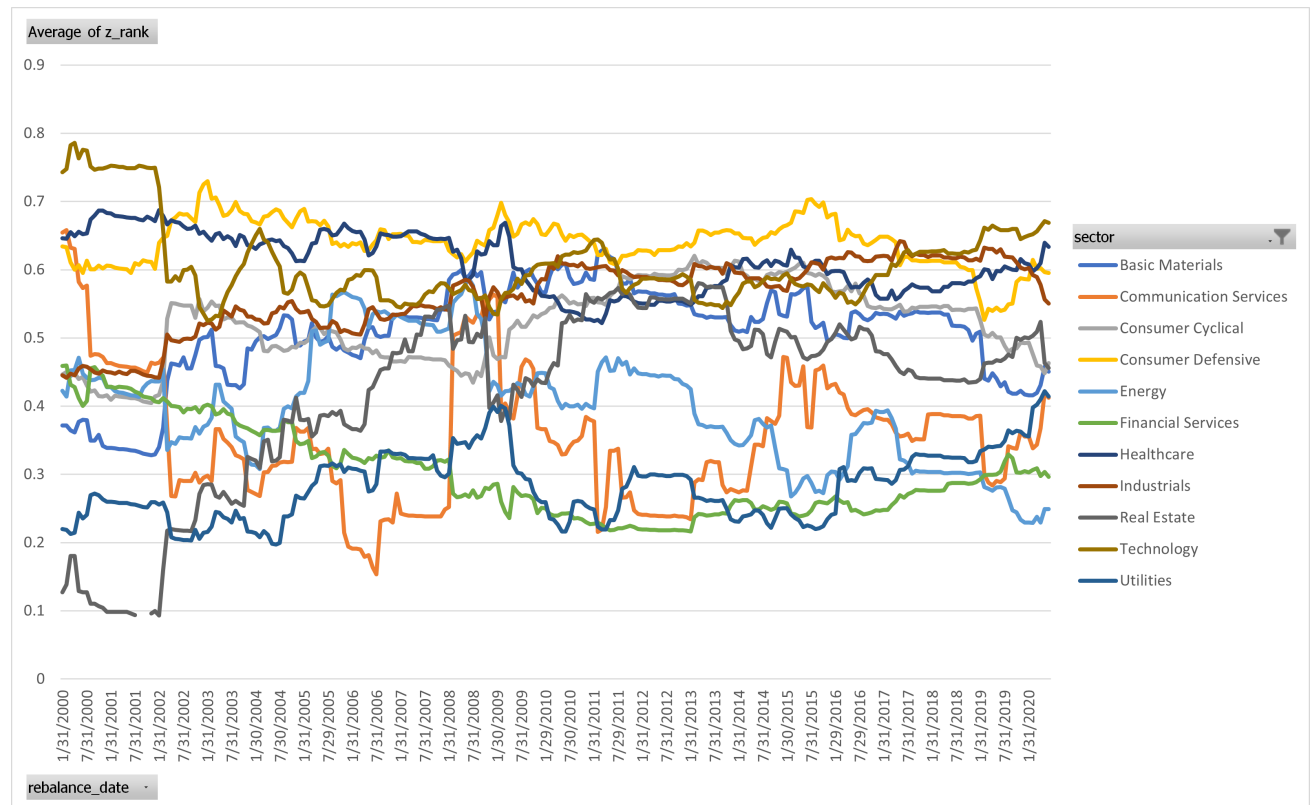


Figure 1: Average pb z score by each sector

- Sectors of high z scores (> 0.5)

As shown in Figure 2, **Technology**, **Healthcare**, **Consumer Defensive** and **Consumer Cyclical** are sectors of consistent high pb ranks historically. Among them, **Technology**, **Healthcare** are the classical growthy sectors. For **Consumer**

Defensive and **Consumer Cyclical**, we took a deeper look into the individual stocks in those sectors.

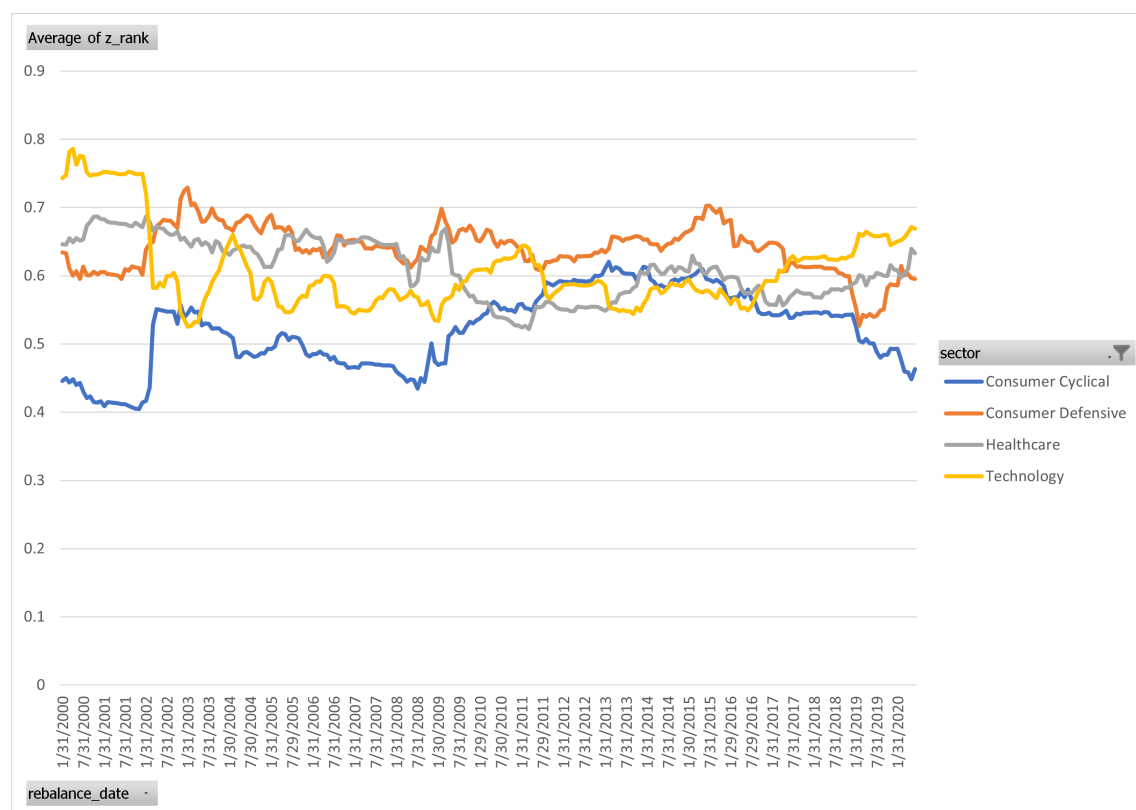


Figure 2: Sectors of high historical z-scores

- Sectors of low z scores (< 0.5)

As shown in Figure 3, **Financials** and **Utilities** have a consistent low pb rank historically. This reflects their nature as traditional value sectors.

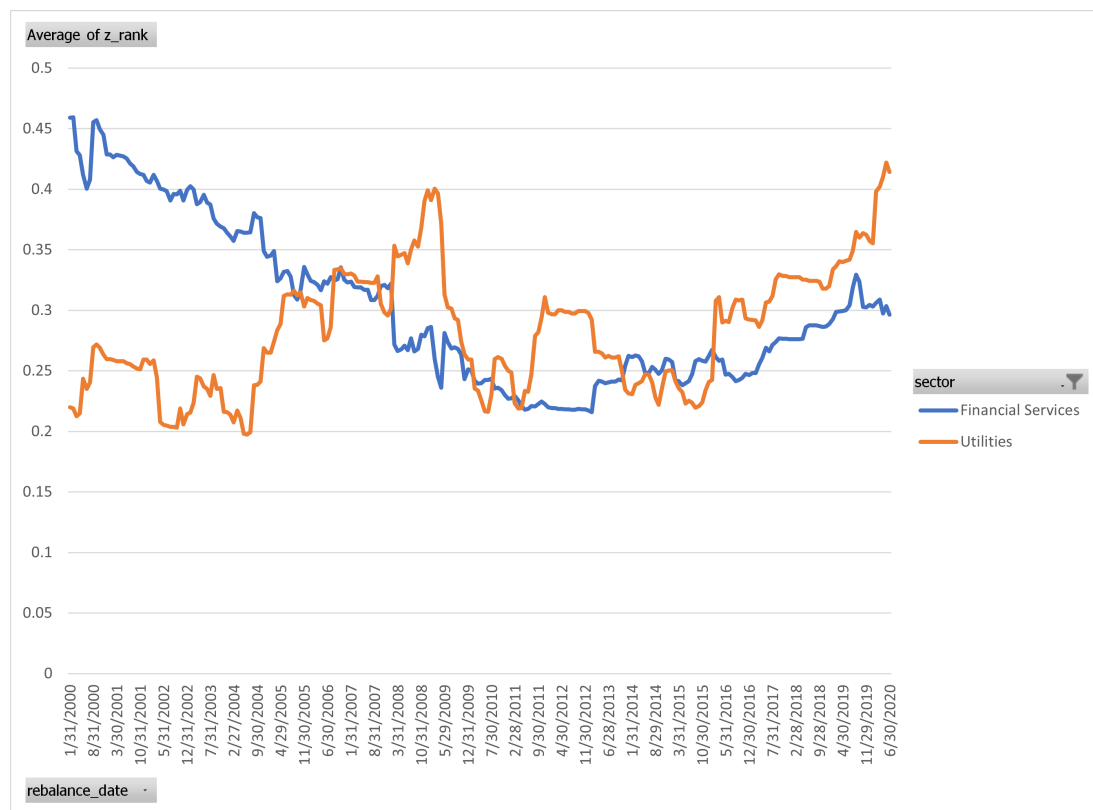


Figure 3: Sectors of low historical z-scores

3.2 IC

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3.3 L/S Portfolio

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