Online Appendix for "Size and Value in China"

by

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This appendix contains a detailed description of the variables used in the paper and a dictionary of the data items obtained from the WIND database/terminals. In section B.1, we describe the construction of variables. Section B.2 provides a mapping between the variables used and the corresponding WIND data items.

B.1. Variable construction

In this section, we describe the construction methods for the variables used in the paper. All the mnemonics are explained in the next section.

1. Firm characteristics.

    (a) Size (ME) represents

      - Daily close price (S_DQ_CLOSE)
           multiplied by
      - Total A-share Outstanding (S_SHARE_TOTALA)

    (b) Value

        i. Earnings-price ratio (EP) is calculated as

          - Net profit excluding non-recurring gains and losses
            (NET_PROFIT_AFTER_DED_NR_LP)
               divided by
          - Daily close price (S_DQ_CLOSE) multiplied by total shares outstanding
            (TOT_SHR)

        ii. Book-to-market ratio (BM) is calculated as

          - Total shareholders' equity excluding minority interests
            (TOT_SHRHLDR_EQY_EXCL_MIN_INT)
               divided by
          - Daily close price (S_DQ_CLOSE) multiplied by total shares outstanding
            (TOT_SHR)

        iii. Cash-flow-to-price (CP) is calculated as

          - Ending balance of cash and cash equivalent
            (CASH_CASH_EQU_END_PERIOD)
               less
          - Beginning balance of cash and cash equivalents
            (CASH_CASH_EQU_BEG_PERIOD)
               divided by

- Daily close price (S_DQ_CLOSE) multiplied by total shares outstanding (TOT_SHR)

(c) Return-on-equity (ROE) is calculated as:

- Net profit excluding non-recurring gains and losses (NET_PROFIT_AFTER_DED_NR_LP) divided by
- Total shareholders' equity excluding minority interests (TOT_SHRHLDR_EQY_EXCL_MIN_INT)

(d) Volatility. Two variables, one-month volatility and MAX, are used.

- One-month volatility is calculated as the standard deviation of daily return (Ret) over the past 20 trading days.
- MAX is calculated as the highest daily return (Ret) over the past 20 trading days

(e) Investment. A firm's investment is measured by its year-to-year annual asset growth rate. That is, it equals the most recent total assets (TOT_ASSETS) divided by the previous year's total assets.

(f) Accruals. Two variables are used:

i. Accruals. A firm's accruals in year t can be expressed as[1]

$$Accrual = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep,$$

$$Accrual\ component = 2 \times Accrual_t / (Total\ asset_{t-1} + Total\ asset_t)$$

CA includes

- Total current assets (TOT_CUR_ASSETS)

$Cash$ includes

- Cash and cash equivalent at the end of the period (CASH_CASH_EQU_END_PERIOD)

CL includes:

- Current liabilities (TOT_CUR_LIABS)

STD is the sum of

- Long-term debt due in one year (NON_CUR_LIAB_DUE_WITHIN_1Y)

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[1]The sorting variable used in the paper is the scaled accruals, which is labeled as *Accrual component* here

- Notes payable (NOTES_PAYABLE)

TP includes:

- Taxes and surcharges payable (TAXES_SURCHARGES_PAYABLE)

DP is the sum of:

- Depreciation of fixed assets, oil and gas assets, and bearer biological assets (DEPR_FA_COGA_DPBA)
- Amortization of intangible assets (AMORT_INTANG_ASSETS)

ii. Net-operating-assets (NOA). A firm's NOA is calculated as

$$NOA = (Operating\ asset_t - Operating\ liabilities_t)/Total\ asset_{t-1}.$$

$Operating\ asset_t$ represents:

- Total assets (TOT_ASSETS)

    less

- Cash (MONETARY_CAP)

    less

- Short-term investment (TRADABLE_FIN_ASSETS)

$Operating\ liabilities_t$ represents:

- Total assets (TOT_ASSETS)

    less

- Short-term borrowings (ST_BORROW)

    less

- Long-term borrowings (LT_BORROW)

    less

- Minority interest (MINORITY_INT)

    less

- Total shareholders' equity excluding minority interest (TOT_SHRHLDR_EQY_EXCL_MIN_INT)

(g) Illiquidity. A stock's daily illiquidity measure is calculated as:

$$Illiq_t = |ret_t|/volume_t,$$

in which $|ret_t|$ is the stock's absolute return on day t, and $volume_t$ is the stock's dollar trading volume on day t.

(h) Twelve-month turnover is measured as the average daily share turnover over the past 250 days. Abnormal turnover is calculated as the ratio of average daily turnover over the past 20 days to average daily turnover over the past 250 days.

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- A firm's daily turnover is calculated as:

$$Turnover_t = volume_t/shrout_t$$

(i) Stock-level reversal. The cumulative return over the past 20 trading days is calculated as:

$$Reversal_t = \prod_{\tau=t-20}^{t} Ret_\tau,$$

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2. Statement type (STATEMENT_TYPE): if available, data with statement type "408005000" are used. If not, those with statement type "408001000" are used.

B.2. Data items dictionary

In this section, we provide details on the data items used to construct all the variables and measures in the paper. For China's A-share stocks, all trading and financial data for individual stocks are from WIND. Two identifiers are listed below. The mnemonics are used to identify the items in the WIND database (Chinese: 万德底层数据库), and the Chinese names listed in the parentheses can be used to identify the data items on the WIND terminals.

1. WIND Mnemonics of Stock Trading Data

   Stock ID: S_INFO_WINDCODE (Chinese: 股票代码)

   Close price: S_DQ_CLOSE (Chinese: 收盘价)

   Return (Ret): (Chinese: 涨跌幅) [2]

   Trading volume ($volume$): S_DQ_VOLUME (Chinese: 成交量)

   Total A-share outstanding: S_SHARE_TOTALA (Chinese: A股合计)

   Total shares outstanding ($shrout$): TOT_SHR (Chinese: 总股本)

   Cumulative Factor to Adjust Prices: S_DQ_ADJFACTOR (Chinese: 复权因子)

2. WIND Mnemonics of Firms Financial Data

   Report period: REPORT_PERIOD (Chinese: 报告期)

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[2]Return series used are downloaded from the WIND terminal. This item has been already adjusted for splits and includes dividends reinvestment. Note that the returns downloaded from the WIND database are not adjusted for splits.

Announcement date: ANN_DT (Chinese: 公告日期)

Balance sheet variables:

Cash: MONETARY_CAP (Chinese: 货币资金)

Tradable Financial Assets: TRADABLE_FIN_ASSETS (Chinese: 交易性金融资产)

Total current assets: TOT_CUR_ASSETS (Chinese: 流动资产合计)

Total assets: TOT_ASSETS (Chinese: 资产总计)

Short-term borrowing: ST_BORROW (Chinese: 短期借款)

Tradable financial liabilities: TRADABLE_FIN_LIAB (Chinese: 交易性金融负债)

Notes payable: NOTES_PAYABLE (Chinese: 应付票据)

Taxes and surcharges payable: TAXES_SURCHARGES_PAYABLE (Chinese: 应交税费)

Non-current liabilities due within one year: NON_CUR_LIAB_DUE_WITHIN_1YR (Chinese: 一年内到期的非流动负债)

Long-term borrowing: LT_BORROW (Chinese: 长期借款)

Total current liabilities: TOT_CUR_LIAB (Chinese: 流动负债合计)

Minority interest: MINORITY_INT (Chinese: 少数股东权益)

Total shareholders' equity excluding minority interests: TOT_SHRHLDR_EQY_EXCL_MIN_INT (Chinese: 股东权益合计(不含少数股东权益))

Income statement variables:

Net profit excluding non-recurring gains and losses: NET_PROFIT_AFTER_DED_NR_LP (Chinese: 扣除非经常性损益后净利润)[3]

Cash-flow statement variables:

Cash and cash equivalent at the beginning of the period: CASH_CASH_EQU_BEG_PERIOD (Chinese: 期初现金及现金等价物余额)

Cash and cash equivalent at the end of the period: CASH_CASH_EQU_END_PERIOD (Chinese: 期末现金及现金等价物余额)

Depreciation of fixed assets, oil and gas assets, and bearer biological assets DEPR_FA_COGA_DPBA (Chinese: 固定资产折旧、油气资产折耗、生产性生物资产折旧)

Amortization of intangible assets: AMORT_INTANG_ASSETS (Chinese: 无形资产摊销)

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[3]Note that, if this item is missing, we assume the non-recurring loss/profit is zero and use net profit (excluding minority interest income) instead. The WIND mnemonic for the later is: NET_PROFIT_EXCL_MIN_INT_INC (Chinese: 净利润(不含少数股东损益))