PEAK6 Data

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# Section I. Servers

The below is a list of servers which contain various pieces of useful data. One should be aware that while the list of servers might be enough for most purposes, this is by no means an exhaustive list.

|  |  |
| --- | --- |
| **Server Name** | **Description** |
| SQL3 | Main SQL server supporting day-to-day trading operations. |
| PPI-SQL9 | Main SQL server supporting reporting |
| SQL10 | SQL server supporting Seven’s operations |
| pg-refdata-prd:5200 | Postgres SQL server used to import and process external data sets; also some processed reference data sets such as earnings seem to live here |
| pvwchi6psql3 | Old SQL3, containing old trades, positions, and old execution data (prior to Phoenix) |
| Pslchi6ppgsql10:5500 | Current Phoenix execution database |
| pslchi5ppgsql10 | Redis server containing live and historical buy/sell limits |
| Execution MongoDB | Contains ‘raw’ execution data from Phoenix operations |
| pswchi6psql2 | Miscellaneous interesting data |

# Section II. Data

## Stock Symbology

### Symbol Mapping (Current)

Different data sets use different ways to identify stock symbols – IVYDB might use its integer security id, PEAK6 internally use both company id and the newer PEAK6 security ID. There are CUSIP’s from different sources, but these CUSIP’s sometimes don’t match.

The below table contains the current mapping among IVYDB ticker, IVYDB security ID, CUSIP from IVYDB, PEAK6 company id, PEAK6 security ID, and symbols from Goldman.

PPI-SQL9

select \*

from SymbolMaster..tblMapP6Symbol2Security

How is it constructed?

By reconciling the following sources:

* + - IvyDB
    - Companies..tblStocks
    - SymbolMaster..tblActiveSecurityId

What it does not do?

* + - It does not cover symbol mapping to other data sources, such as FactSet

### History of stock symbol change

When stock symbol changes, it is important to correlate data before and after the change. Our official sources of symbol history is tblEquity and tblActiveSecurities. They have slightly different information. The former shows company id, industry, ticker, cusip, and PAEAK6 security ID history. The latter only shows IVYDB security ID, ticker, and PEAK6 securityID history.

PPI-SQL9

select top 100 \*

from DataMaster..tblEquity

select top 100 \*

from symbolmaster.dbo.tblActiveSecurities

How is ot constructed?

* + tblEquity is from the following sources
    - tblActiveSecurities
    - Pink sheet symbols from CIQ
  + tblActiveSecurities is from the following sources
    - IVYDB
    - SFB

## Corporate Actions

The below query shows announced corporate actions from BB

SQL3

select top 1000 def.actiontype, def.actionmnemonic, bb.\*

from BloombergDB..tblBBCorpActions bb

join BloombergDB..tblBBCorpActionDefns DEF

ON bb.mnemonicid = def.mnemonicid

where rowout > getdate()

and flag != 'D'

order by bbactionid

## Adjust Stock and Option Positions and Prices from Corporate Actions

After a corporate action, the stock and option positions and stocks need to be adjusted. The below tables define how things adjust.

### Adjust an option position after a corporate action

This table shows how an option position before the corporate action is adjusted to the option position after the corporate action.

SQL3

select \*

from companies..tblSFBOptionCorpAction4\_Historical

How is it constructed?

* + Overnight from SFB

### Adjust option price after a corporate action

This table shows how the price of an option before a corporate action is adjusted to the price of the same option after the corporate action.

SQL3

select top 100 \*

from DataMaster..tblAdjustedOptionPrice

### Adjust stock price after a corporate action

This table contains stock price adjustment factors on the ex-dates when the stock price needs to be adjusted due to dividends or corporate actions.

SQL3

Select top 100 \*

From DataMaster..tblAdjustedEquityPrice

How is it constructed?

* Bloomberg corporate action
* PEAK6 dividend forecast

### Deliverables when a multi-hedge option is exercised

These tables define the deliverables of a multi-hedge option. They also determine how multi-hedge options should be priced.

SQL3

select top 10 \*

from companies.dbo.tblSFBDeliverable\_Historical

PPI-SQL9

select top 100 \*

from datamaster..tblMultiHedge

How are the tables constructed?

* tblSFBDeliverable\_History – from SFB
* tblMultiHedge - A combination of manually entered data and SFV

## Dividends

### Dividend forecasts

This table contains the current and historical dividend forecasts. Note the difference between historical dividend forecasts and actual dividends.

SQL3

Select top 100 \*

From companies..tblDividendForecasts

How is the table constructed?

* This is a combination of external and internal sources
* DateAlgorithmUsed: <0 means external or manual; >0 means internal algorithm

The data directly from Markit actually has more information. For example, it has the declare date.

pg-refdata-prd:5200. Reference\_data

select \*  
from peak6\_raw.sola\_client\_dividends  
limit 100

### Actual Dividends

There are two ways. First notice that as the date approaches ex-date, the dividend is declared and forecast uncertainty disappears. This means it is possible to use the dividend forecast table above to figure out the actual dividends. This is exactly how the clearing group adjusts the stock price ex-div. Another perhaps more direct source is IVYDB..DISTRIBUTION

SQL3 or PPI-SQL9

Select top 10 \*

From IVYDB..DISTRIBUTION

## Daily Historical Prices (O/L/H/C), volumes, and open interests

### Historical daily stock prices and volume

There are several sources to get historical daily stock prices

SQL3 or PPI-SQL9

Select top 10 \*

From IvyDB..SECURITY\_PRICE

PPI-SQL9

select top 10 \*

From DataMaster..tblEquityPrice

SQL3

Select top 10 \*

From igtdev..tblStockHistory

How are the tables constructed?

* To be verified

### Historical daily option prices, volume, and OI

SQL3 or PPI-SQL9

Select top 10 \*

From IvyDB..OPTION\_PRICE

PPI-SQL9

select top 10 \*

From DataMaster..tblOptionPrice

How are the tables constructed?

* To be verified

## Events

### Earnings date forecast (current and historical)

Reference\_data\_shared on pg-refdata-prd:5200

select \*

from earnings

limit 100

How is this table constructed?

* Imported from WSH
* Manually entered (sources are PRNews for example)

The below table seems to contain the same information.

SQL3

select top 100 \*  
from companies..tblearnings

How is this table constructed?

* To be verified

### Preannouncement

SQL3

select top 100 \*

from companies..tblPreAnnounce

How is this table constructed?

* From FactSet
* What are the other sources?
* What is the data source field?

### Dates of announced events

The below two tables forecasts the various event dates in the future. The *confirmed* field shows whether the event is confirmed.

To give an idea of what types of events are included, below is an non-inclusive list:

* + - Earnings Date
    - Analyst Meeting
    - Shareholder Meeting
    - PDUFA Date
    - FDA Advisory Committee
    - Oil Production Figures
    - Industry Equipment Conference

SQL3

select top 100 \*

from companies..tblCalendarItems

where createdate > '20161205'

select \*

from companies..tblCalendarTypes

How is the table constructed?

* FactSet is for sure one of the data sources
* What are the other data sources? Meaning of Source field

## Fundamental Data

PPI-SQL9: CIQ

To be verified as people are still working on getting me access permission

## High Frequency

### TickDB

Documentation is [here (double click)](https://github.peak6.net/pages/7/tickdb/tickdb.html#module-tickdb.tickdb)

Proprietary tickDB that contains

* Option quotes and NBBO
* Option prints
* Stock quotes
* Stock prints
* Internal (Diego) stock quotes and prints
* Implied vols and Greeks

### 5-minute stock price

These are 5-minute stock bar data

pswchi6psql2

select top 10 \*

FROM [IvyDB].[dbo].[tblVwapStockPrice]

### 30-minute option prices and Greeks

TODO: find out where

### Auctions, books, flashes, and spreads

The following table contains all PIP, flash, and book orders for both single options and spreads from various exchanges

SQL10

Select top 10 \*

From tblAuctions

## Execution

### Phoenix execution

Database *execution* on pslchi6ppgsql10:5500 contains all data points of Phoenix algos, orders, and fills

### Seven execution

Database *SparkTools* on SQL10 contains all data points of Seven’s execution algos

## Rates: Internal interest rates and hard to borrow rates

### Firm interest rates by clearing firm(current and historical)

The below table shows the interest rate curves from multiple clearing firms

SQL3

select \*

from companies..tblMPDualRates

The below table contains the history.

SQL3

select \*

from companies..tblMPDualRates\_audit

How is the table constructed?

* Manually entered

### Clearing firm interest rates (current and historical)

These are the historical and current interest rates the clearing firms pay or charge.

SQL3

select top 100 \*

from PEAK6Clearing..tblMPInterestRates

### Hard to borrow rates (current and historical)

These are the historical and current hard to borrow rates from various clearing firms.

SQL3

select top 100 \*

from PEAK6Clearing..tblMPFOCHardToBorrow

How is the table constructed?

* Imported from clearing firm nightly files

## Positions and Trades

### Daily PnL archive

This table contains daily archives of open positions and trades. The Greeks, PnL, PnL decomp, and volatility at the close are included in the archive.

SQL3

select top 10 \*

from position..tblPnLPositionHistory

How is the table constructed?

* Every evening, the data from the WRT server is archived to this table
* Every night, the closing prices and PnLs are adjusted when Goldman’s prices are significantly different from ours

### Real-time trades, open positions, morning break adustments, reorg adjustments

This table contains real-time trades and opening positions, along with the Greeks right after the trade. The trades enters into the table in real-time.

SQL3

select top 10 \*

from position..tblActivities

How is the table constructed?

* Whenever a trade hits GPS in real-time, it is recorded to the table
* Nightly process combines all the trades into open positions for next day
* Morning process to compare open positions and trades with clearing firm and make adjustments accordingly
* Morning process to make adjustments for corporate actions

## Groups of Stock: industries, subindustries

### List of industries (current only)

The below defines the industry codes.

SQL3

select \*

from companies..tblIndustries

### List of Sub-industries (current only)

The below defines all the sub-industries

SQL3

select \*

from companies..tblCompanyGroups

### Stocks in industries and subindustries (current only)

To correlate stock symbols to the sub-industry, use the following:

SQL3

select \*

FROM companies.dbo.vwCompaniesbyGroup

## Index Components (current and historical)

The below table contains the components of various ETFs and indexes. Weights are also included.

SQL3

select \*

from IndexTrading..tblIndexComponents

How is this table constructed?

* Bloomberg component file
* Goldman “spread” file

## Definition of Trader Groups

### List of SBUs

SQL3

select \*

from peak6clearing..tblBusinessUnits

### Traders in an SBU (Current and historical)

SQL3

select top 100 \*

from PEAK6Clearing..tblBusinessUnitMemberDimension

## Buy/Sell Limits

### Robo Limits (5 min snapshots)

These are the 5-minute snapshots of the robo trader limits

SQL10

select top 10 \*

from sparktools..tblRoboTraderLimits

### “Raw” Buy/Sell Limits (all updates)

These are the “raw” limits directly from the B/S limit service

SQL10

select top 10 \*

from sparktools..tblBSLimitsUpdate

## Miscellaneous

### Penny name vs non-penny name (current and historical)

To find the current penny names, use the following:

SQL3

select top 100 \*

from Companies.dbo.tblStocks

To find historical penny names, use the following:

PPI-SQL9

select \*

from DataMaster.dbo.tblPennyWideQuote

### MM name (current and historical)

The below gives the current MM names

SQL3

select top 100 \*

from Companies.dbo.tblStocks

The below gives the history of MM symbols

PPI-SQL9

select top 100 \*

from symbolmaster.dbo.tblActiveSecurities

where rowout >= rowin and p6securityid > 0

order by p6securityid