SPIDERROCK

Data & Analytics

Historical Product Overview

Robust historical market data and analytics enabling our clients to gain insights and make data-driven decisions

FEATURES

- Datasets support all US-listed Equities, Futures, Equity Options, and Options on Futures
- End-of-day files, intraday snapshots as well as tick data available with corresponding reference data
- Options-specific data includes implied volatility, Greeks, surfaces, risk slides, and short-term trade performance
- Enhanced analytics used by wide range of practitioners providing insights on market trends
- Underlying prices, size, volume, prints, open interest and reference data

COMPETITIVE ADVANTAGE

Clients can focus on developing strategies by leveraging our analytics. SpiderRock is a respected brand in calculating implied volatility, greeks, risk metrics, and fitting volatility surfaces.

- Fast incubation of new trading strategies
- Model market volatility and relative market movement
- Assess risk and margin requirements
- Evaluate trade cost analysis (TCA)
- Run portfolio evaluation and manage end-of-day marks

QUALITY

Our historical data is derived from the live data and analytics which powers the SpiderRock trading system and ensures a high level of accuracy and consistency.

- Represents market activity at point-in-time
- Cleaned and well documented
- Evaluated for validity and accuracy to minimize errors
- Statistical analysis on our data to verify completeness

USE CASES

CLIENT TYPES

Trading Community

Risk & Compliance Administration

Regulators & Research Community

APPLICATIONS

Create, back-test, incubate, and optimize trading strategies
Trade cost analysis (TCA)

Portfolio management risk identification
Model market volatility and relative market movement
Replay market patterns

Compliance reporting

Identify market trends
Academic research purposes

SpiderRock Data Liberator API For Historical Data

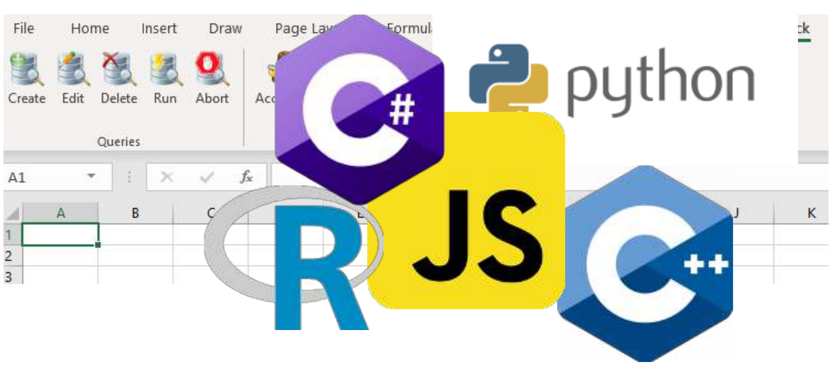
The SpiderRock Data Liberator Service provides easy access to historical datasets using a Restful API

Unlock your productivity and increase your efficiency when using historical data. Data delivery is on demand – how and when you prefer. The Liberator API allows you to select the data you need by date ranges and times, by single or groups of ticker symbols.

Using the API reduces the need to download and store large data sets during your research process and allows you to focus your efforts on performing the analysis and not managing the data. Through our Liberator API you can access SpiderRock Options, Stock and Futures data within your own applications using our cloud, compute power and pre-optimized query access for a simple monthly fee (*).

API FEATURES

- Single data access API for historical time series data; point-in-time and time series
- Datasets support all US-listed equities, options and indexes
- Historical data queries from our cloud storage
- No need to download and maintain large options market historical datasets
- Allows users to easily include data directly into algorithms
- Multiple language support / Native-language APIs and Spreadsheet plug-in



SpiderRock Liberator API comes with starter codes and notebooks for different languages that enable users to get started quickly.   On-line help and security index tables allow fast look up of information.

The API is also integrated with Microsoft Excel™ for those with work processes involving downloading specific data and analyzing this data in spread sheet applications.

(*) Various data access plans; tiered based on number of queries or monthly data egress up to unlimited access. Contact SpiderRock Data Sales at gwtsales@spiderrock.net to start you free trial today.

Data Liberator functionality is provided by CloudQuant (www.cloudquant.com).

PRODUCT OFFERING

DATA TABLES	FREQ	HISTORY	PRICE	VOLUME	SIZE	GREEKS	IMPLIED VOL	VOL SURFACE
STOCK								
Stock Close Marks	EOD	Jan-10	X	X	X			
Stock Minute Bars	1 Min	Jan-10	X	X				
Stock Print Set	Trades	Jan-16	X	X	X			
Stock Imbalances Data	Every Tick	Feb-19	X	X				
EQUITY OPTIONS								
Options Close Marks	EOD	Jan-10	X	X	X	X	X	X
Options Price History ID	30 min	Jan-15	X	X	X	X	X	X
Options Price History HID	5 min	Jan-20	X	X	X	X	X	X
Options Minute Bars ATM	1 min	Jan-20	X				X	
Options Print Set	Trades	Jan-14	X	X	X	X	X	X
US FUTURES INDEXES, ETF, INDEX OPTIONS								
Futures Close Marks	EOD	Jan-19	X	X				
Futures Minute Bars	1 Min	Jan-16	X	X				
Futures Print Set	Trades	Jan-16	X	X	X			
Options (F) Close Marks	EOD	Jan-10	X	X		X	X	X
Options (F) Price History ID	30 min	Jan-15	X	X	X	X	X	X
Options (F) Price History HID	5 min	Jan-20	X	X	X	X	X	X
Options (F) Minute Bars ATM	1 min	Jan-20	X				X	
Options (F) Print Set	Trades	Jan-14	X	X	X	X	X	X
Option Pair Set ID ES								
OPTIONS VOLATILITY SURFACES								
Surface Curves EOD	EOD	Jan-10	X			X	X	X
Fixed Grid Surface EOD	EOD	Jan-10					X	X
Fixed Term Surface ATM EOD	EOD	Jan-10					X	X
Surface Curves ID	10 Min	Jan-19	X			X	X	X
Fixed Grid Surface ID	10 Min	Feb-19					X	X
Fixed Term Surfaces ATM ID	10 Min	Jan-18					X	X
VOL2G EQUITY OPTIONS VOLATILITY BUNDLE								
Stock Close Marks	EOD	Jan-10	X	X				
Options Close Marks	EOD	Jan-10	X	X	X	X	X	X
Options Fixed Grid Surfaces	EOD	Jan-10					X	X
Options Fixed Term Surfaces ATM	EOD	Jan-10					X	X
Volatility History Table by Ticker	EOD	Jan-10	X	X		X	X	X
Equity Reference Tables	EOD	Jan-10	X	X				
EQUITY REFERENCE TABLES								
Ticker Defintion Map (Security ID)	Daily PIT	Jan-10						
Security Price Table (Adjusted)	Daily PIT	Jan-10						
Global Rates	Daily PIT	Jan-10						
Trading Dates	Daily PIT	Jan-10						

Samples available by request. Contact gwtsales@spiderrock.net

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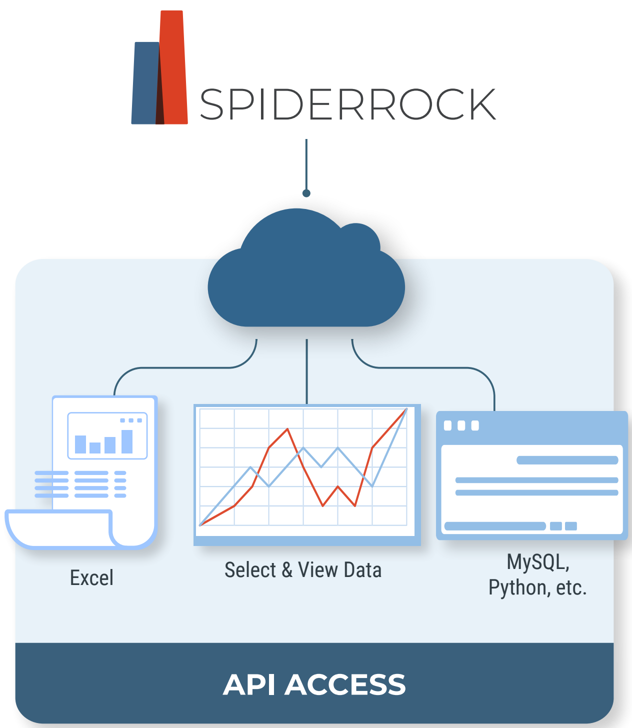
SpiderRock VOL2G

The Analytics Database for U.S. Stock & Equity Options Pricing and Volatility

Out of our real-time trading platform, SpiderRock delivers a comprehensive volatility database and suite of extended data products designed to meet the needs of institutional and academic researchers who depend on high quality historical volatility analytics

KEY DIFFERENTIATORS

- Access via cloud-based API
- Fitted volatility surfaces
- Add-on intra-day data



VOL2G COVERAGE

VOL2G has everything you need for high quality research and analysis

Data Scope

- Over 10 years of historical EOD data for all U.S. exchange traded equity options, indexes, ETFs, ADRs
- Bid/Ask option pricing, volume, open interest
- Underlying stock open, high, low, close prices

Analytics

- Calculated bid/ask implied volatility & surface prices with Greeks
- Multi-point at-the-money smoothed constant maturity curves
- Skew curves and estimated at-the-money skew slopes

Insights

- Implied earnings estimates and historical earnings moves
- Censored implied volatility smoothed to remove event volatility
- Backtest-ready with daily returns and supporting reference data security ID, industry codes and corporate action adjustments

USE CASES

- Create, back-test, optimize trading strategies
- Identify market trends, support academic research
- Portfolio management, risk identification, compliance reporting

ADD-ON DATA

Gain access to additional tick data on demand:

- Intraday option quotes and analytics (5 min intervals)
- Daily option and stock print data with implied volatility metrics
- Daily stock price and volume information

STAY COMPETITIVE WITH SPIDERROCK

VOL2G DATABASE BUNDLE

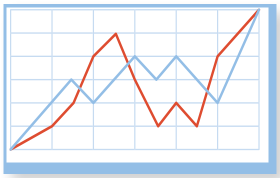
DATABASES	FREQ	HISTORY	PRICE	VOLUME	SIZE	GREEKS	IMPLIED VOL	VOL SURFACE
VOL2G DATABASE BUNDLE								
Stock Open, High, Low, Close	EOD	Jan-10	X	X	X			
Option Price History	EOD	Jan-10	X	X	X	X	X	X
Option Skew Surfaces and Slopes	EOD	Jan-10	X			X	X	X
ATM Constant Volatility Surfaces	EOD	Jan-10	X			X	X	X
Equity Reference Tables	EOD	Jan-10	X	X				

INDIVIDUAL / ADD-ON TABLES

DATA TABLES	FREQ	HISTORY	PRICE	VOLUME	SIZE	GREEKS	IMPLIED VOL	VOL SURFACE
STOCK								
Stock Close Mark	EOD	Jan-10	X	X	X			
Stock Minutes Bars	1 Min	Jan-10	X	X				
Stock Print Set	Every Trade	Jan-16	X	X	X			
Stock Imbalance	Every Tick	Feb-19	X	X	X			
OPTIONS								
Options Close Mark	EOD	Jan-10	X	X	X	X	X	X
Options Price History ID	5 Min	Jan-19	X	X	X	X	X	X
Options Price History ID	30 Min	Jan-15	X	X	X	X	X	X
Options ATM Minute Bars	1 Min	July-20					X	
Options Print Set	Every Trade	Jan-14	X	X	X	X	X	X

FLEXIBLE DELIVERY

Customized daily file or bulk downloads from our data lake



Visualize the data via SpiderRock's Chart Tool or other software

Subscription access to the most current time series datasets via excel, python, mysql, etc.

SPIDERROCK

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SpiderRock Historical Data Archive
VOL2G Database

Contents

Available data in the VOL2G Database

Table Name	From (Start Date)	Summary Description
Stock SR Closing Marks	01/04/2010	Stock SR Closing Mark records are created immediately after the market close, when exchanges publish official marks. These records contain closing quotes and prices.
Options SR Closing Marks	01/04/2010	Option Closing Mark records are created immediately after the market close and when exchanges publish official marks. These records contain closing quotes and prices as well as markup details for all outright options. SpiderRock includes their own algorithms that create estimates of the correct theoretical price, creating the SpiderRock closing mark.
Options Surface Fixed Term EOD	01/04/2010	Options Surface Fixed Term records contain an implied volatility term record including skew slopes at standardized days-to-expiration. For equity options, the resulting censored ATM expiration values are interpolated on a fixed-term grid (5d, 10d, 21d, 42d, 63d, 84d, 126d, 252d, and 512d). For equity options with regular earnings announcements, we split implied volatilities into two parts: a component due to the future earnings announcement moves and a baseline, censored component, which excludes any earnings announcement events.
Options Surface Fixed Grid EOD	01/04/2010	This table contains a live gridded (interpolated) censored implied volatility surface. Each record contains standardized live and prior period implied volatilities at standardized skew points for a standardized days-to-expiration value.

Stock SR Closing Marks

Stock SR Closing Mark records are created immediately after the market close, when exchanges publish official marks. These records contain closing quotes and prices.

Order	Field	Data Type	Comment
1	ticker_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	Symbol Asset Type
2	ticker_ts	enum('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX','TSE')	
3	ticker_tk	varchar(12)	Asset Symbol
4	tradingDate	datetime	Trading Date
5	tradingSession	enum('None','RegularMkt','PreMkt','PostMkt','PostMktETF','NextDay')	Trading Session: ('None','RegularMkt','PreMkt','PostMkt','PostMktETF','NextDay')
6	clsMarkState	enum('None','LastPrt','SRClose','ExchClose','Final')	close mark state. None; LastPrt; SRClose; ExchClose; Final
7	opnPrc	float	open price
8	minPrc	float	Low price
9	maxPrc	float	High price
10	sharesOutstanding	int(11)	shares outstanding
11	prtCount	int(11)	print count
12	prtVolume	int(11)	print volume
13	realizedVol	float	realized vol
14	avgMktSize	float	average market size
15	avgMktWidth	float	average market width
16	bidPrc	float	bid price (close - 1min)
17	askPrc	float	ask price (close - 1min)
18	srClsPrc	float	SR close mark (close - 1min)
19	closePrc	float	official exchange closing mark (last print;then official close)
20	incEarnings	enum('None','PrevDay','Today','NextDay')	this trading period includes an earnings announcement
21	divStatus	enum('None','DivPaying','NoDividends')	('None','DivPaying','NoDividends')
22	priorDate	datetime	Prior Trading Date
23	priorTicker_tk	varchar(12)	prior period stock key (same as ticker on most days)

24	prcAdjValue	float	corp action adjustment value (0.0 on most days) currentPrice = priorPrice * factor + value
25	prcAdjRatio	float	corp action adjustment factor (1.0 on most days)
26	priorSRClsPrc	float	values archive in the previous trading period
27	priorClosePrc	float	Prior Trading Date Close Price
28	timestamp	datetime	

Options Closing Marks

Option Closing Mark records are created immediately after the market close and when exchanges publish official marks. These records contain closing quotes and prices as well as markup details for all outright options. SpiderRock includes their own algorithms that create estimates of the correct theoretical price, creating the SpiderRock closing mark.

* Indicates the content of basic version of the file.

Data Updates/Fixes/Problems

Order	Field	Type	Description
1	okey_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	Option Underlying Asset Type
2	okey_ts	enum('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX','TSE')	Option Ticker Source
3	okey_tk	varchar(12)	Option symbol
4	okey_yr	smallint(5) unsigned	Option expiration year
5	okey_mn	tinyint(3) unsigned	Option epiration Month
6	okey_dy	tinyint(3) unsigned	Option expiration day
7	okey_xx	double	option strike
8	okey_cp	enum('Call','Put','Pair')	option call/put indicator
9	tradingDate	datekey	Trading Date
10	tradingSession	enum('None','RegularMkt','PreMkt','PostMkt','PostMktETF','NextDay')	Trading Session ('None','RegularMkt','PreMkt','PostMkt','PostMktETF','NextDay')
11	undSecKey_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	Underlying Asset Type
12	undSecKey_tk	varchar(12)	Underlying Ticker
13	undSecKey_yr	smallint(5) unsigned	Underlying Asset Expiration Year
14	undSecKey_mn	tinyint(3) unsigned	Underlying Asset Expiration Month
15	undSecKey_dy	tinyint(3) unsigned	Underlying Asset Expiration Day
16	undSecType	enum('None','Stock','Future','Option','MLeg')	Underlying Security Type
17	srCloseTime	time	SR closing mark time (C)

18	clsMarkState	enum('None','LastPrt','SRClose','ExchClose','Final')	Close mark state: None; LastPrt; SRClose; ExchClose; Final
19	uSrCls	double	SR underlier closing mark (C - 1m)
20	uClose	double	Exchange underlier closing mark
21	srClsPrc	double	SR close mark (close - 1min)
22	closePrc	double	Official exchange closing mark (note: may not be as/of srCloseTime)
23	srPrc	float	SpiderRock surface price (price corresponding to srVol; may not always be within bid/ask) (C - 1m)
24	srVol	float	SpiderRock surface volatility (C - 1m)
25	timestamp	datetime	
26	uBid	double	SR closing underlier bid (C - 1m)
27	uAsk	double	SR closing underlier ask (C - 1m)
28	bidPrc	float	SR closing option bid (C - 1m)
29	askPrc	float	SR closing option ask (C - 1m)
30	bidIV	float	implied vol of SpiderRock closing bid price (C - 1m)
31	askIV	float	implied vol of SpiderRock closing ask price (C - 1m)
32	de	float	delta (SR surface)
33	ga	float	gamma (SR surface)
34	th	float	theta (SR surface)
35	ve	float	vega (SR surface)
36	rh	float	rho (SR surrface)
37	ph	float	phi (SR surface)
38	vo	float	volga (SR surface)
39	va	float	vanna (SR surface)
40	sdiv	float	SR sdiv rate

41	ddiv	float	SR ddiv rate (sum of discrete dividend amounts)
42	rate	float	SR interest rate
43	years	float	years to expiration
44	error	tinyint(3) unsigned	SR pricing library calculation error code
45	openInterest	int(11)	Open Interest
46	prtCount	int(11)	Print Count
47	prtVolume	int(11)	total printed volume
48	priorDate	datetime	Prior Trading Day Date
49	prcAdjValue	float	corp action adjustment value (0.0 on most days); [todayPrice = priorPrice * prcAdjRatio + prcAdjValue]
50	prcAdjRatio	float	corp action adjustment factor (1.0 on most days)
51	priorSRClsPrc	float	values archive in the previous trading period
52	priorClosePrc	float	Prior Trading Day Closing Price

Options Surface Fixed Term EOD

Options Surface Fixed Term records contain a live implied volatility term record at standardized days-to-expiration. This data takes a snapshot of the market every 10 minutes (5 mins starting 2020). SurfaceType = 'PriorDay' records contain the final record from the prior trading day.

Order	Data Name	Type	Comment
1	ticker_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	Ticker Asset Type
2	ticker_ts	enum('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX','TSE','DJI')	Ticker source
3	ticker_tk	varchar(12)	Ticker
4	date	datetime(6)	end of minute bar
5	securityID	bigint	
6	tradingDate	date	
7	tradingSession	enum('None','RegularMkt','PreMkt','PostMkt','PostMktETF','NextDay')	
8	hEMove	float	expected forward earnings move (average of the last 8-12 underlier earnings moves; w/max clipping)
9	hEMoveNum	tinyint unsigned	num historical earnings moves in historical window
10	hEMoveAvg	float	avg historical earnings move (last 8-12 underlier earnings moves)
11	hEMoveStd	float	std historical earnings move (last 8-12 underlier earnings moves)
12	hEMoveMin	float	min historical earnings move (last 8-12 underlier earnings moves)
13	hEMoveMax	float	max historical earnings move (last 8-12 underlier earnings moves)
14	iEMove	float	implied earnings move (implied move; all earnings events)
15	iEFitCode	enum('None','Minimum','CenterError','LeftError','RightError','SplitError','DecentError','LeftBound','RightBound','MaxSteps','CenterFlat')	mplied EFit Code
16	iEFitError	float	eMove fit error (term surface fit error)

17	expiryCount	tinyint unsigned	number of actual expirations involved
18	iEMoveAvg	float	average eMove today
19	iEMoveStd	float	eMove std dev today
20	iEMoveMin	float	eMove min today
21	iEMoveMax	float	emove max today
22	iEMoveCnt	int	number of surface term fits today
23	eMoveExpAdj1	int	number of expirations (+/-) that the next earn date was moved to best fit market term structure (if any)
24	eMoveYrsAdj1	float	number of trading years (+/-) that the next earn date was moved to best fit market term structure (if any)
25	eMoveYears1	float	years to expiration from LiveSurfaceCurve.pkey.ekey = eMoveFKey1
26	eMoveEKey1_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	LiveSurfaceCurve.pkey.ekey immediately after 1st implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj1 != 0)
27	eMoveEKey1_ts	enum('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX','TSE','DJI')	LiveSurfaceCurve.pkey.ekey immediately after 1st implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj1 != 0)
28	eMoveEKey1_tk	varchar(12)	LiveSurfaceCurve.pkey.ekey immediately after 1st implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj1 != 0)
29	eMoveEKey1_yr	smallint unsigned	LiveSurfaceCurve.pkey.ekey immediately after 1st implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj1 != 0)
30	eMoveEKey1_mn	tinyint unsigned	LiveSurfaceCurve.pkey.ekey immediately after 1st implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj1 != 0)
31	eMoveEKey1_dy	tinyint unsigned	LiveSurfaceCurve.pkey.ekey immediately after 1st implied earnings move (note: this will

			not match the base earnings calendar if eMoveDtAdj1 != 0)
32	eMoveExpAdj2	int	number of expirations (+/-) that the 2nd earn date was moved to best fit market term structure (if any)
33	eMoveYrsAdj2	float	number of trading years (+/-) that the 2nd earn date was moved to best fit market term structure (if any)
34	eMoveYears2	float	years to expiration from LiveSurfaceCurve.pkey.fkey = eMoveFKey2
35	eMoveEKey2_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	LiveSurfaceCurve.pkey.ekey immediately after 2nd implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj2 != 0)
36	eMoveEKey2_ts	enum('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX','TSE','DJI')	LiveSurfaceCurve.pkey.ekey immediately after 2nd implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj2 != 0)
37	eMoveEKey2_tk	varchar(12)	LiveSurfaceCurve.pkey.ekey immediately after 2nd implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj2 != 0)
38	eMoveEKey2_yr	smallint unsigned	LiveSurfaceCurve.pkey.ekey immediately after 2nd implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj2 != 0)
39	eMoveEKey2_mn	tinyint unsigned	LiveSurfaceCurve.pkey.ekey immediately after 2nd implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj2 != 0)
40	eMoveEKey2_dy	tinyint unsigned	LiveSurfaceCurve.pkey.ekey immediately after 2nd implied earnings move (note: this will not match the base earnings calendar if eMoveDtAdj2 != 0)

41	atmCenI_st	float	short term (5 day) model atm volatility (censored using iEMult)
42	atmCenI_lt	float	long term (504 day) model atm volatility
43	atmCenI_decay	float	model decay parameter
44	atmCenI_5d	float	Interpolated 5 day atm vol (censored using iEMult)
45	atmCenI_10d	float	Interpolated 10 day atm vo
46	atmCenI_21d	float	Interpolated 21 day atm vol
47	atmCenI_42d	float	Interpolated 42 day atm vol
48	atmCenI_63d	float	Interpolated 63 day atm vol
49	atmCenI_84d	float	Interpolated 84 day atm vol
50	atmCenI_105d	float	Interpolated 105 day atm vol
51	atmCenI_126d	float	Interpolated 126 day atm vol
52	atmCenI_189d	float	Interpolated 189 day atm vol
53	atmCenI_252d	float	Interpolated 252 day atm vol
54	atmCenI_378d	float	Interpolated 378 day atm vol
55	atmCenI_504d	float	Interpolated 504 day atm vol
56	atmCenH_st	float	short term (5 day) model atm volatility (censored using hEMult)
57	atmCenH_lt	float	long term (504 day) model atm volatility
58	atmCenH_decay	float	model decay parameter
59	atmCenH_5d	float	Interpolated 5 day atm vol (censored using hEMult)
60	atmCenH_10d	float	Interpolated 10 day atm vol
61	atmCenH_21d	float	Interpolated 21 day atm vol
62	atmCenH_42d	float	Interpolated 42 day atm vol
63	atmCenH_63d	float	Interpolated 63 day atm vol

64	atmCenH_84d	float	Interpolated 84 day atm vol
65	atmCenH_105d	float	Interpolated 105 day atm vol
66	atmCenH_126d	float	Interpolated 126 day atm vol
67	atmCenH_189d	float	Interpolated 189 day atm vol
68	atmCenH_252d	float	Interpolated 252 day atm vol
69	atmCenH_378d	float	Interpolated 378 day atm vol
70	atmCenH_504d	float	Interpolated 504 day atm vol
71	sDiv_5d	float	Interpolated 5 day implied sdiv rate
72	sDiv_10d	float	Interpolated 10 day implied sdiv rate
73	sDiv_21d	float	Interpolated 21 day implied sdiv rate
74	sDiv_42d	float	Interpolated 42 day implied sdiv rate
75	sDiv_63d	float	Interpolated 63 day implied sdiv rate
76	sDiv_84d	float	Interpolated 84 day implied sdiv rate
77	sDiv_105d	float	Interpolated 105 day implied sdiv rate
78	sDiv_126d	float	Interpolated 126 day implied sdiv rate
79	sDiv_189d	float	Interpolated 189 day implied sdiv rate
80	sDiv_252d	float	Interpolated 252 day implied sdiv rate
81	sDiv_378d	float	Interpolated 378 day implied sdiv rate
82	sDiv_504d	float	Interpolated 504 day implied sdiv rate
83	fwdUPrc_5d	float	Interpolated 5 day implied forward price
84	fwdUPrc_10d	float	Interpolated 10 day implied forward price
85	fwdUPrc_21d	float	Interpolated 21 day implied forward price
86	fwdUPrc_42d	float	Interpolated 42 day implied forward price
87	fwdUPrc_63d	float	Interpolated 63 day implied forward price

88	fwdUPrc_84d	float	Interpolated 84 day implied forward price
89	fwdUPrc_105d	float	Interpolated 105 day implied forward price
90	fwdUPrc_126d	float	Interpolated 126 day implied forward price
91	fwdUPrc_189d	float	Interpolated 189 day implied forward price
92	fwdUPrc_252d	float	Interpolated 252 day implied forward price
93	fwdUPrc_378d	float	Interpolated 378 day implied forward price
94	fwdUPrc_504d	float	Interpolated 504 day implied forward price
95	vWidth_5d	float	nterpolated 5 day market vwidth
96	vWidth_10d	float	Interpolated 10 day market vwidth
97	vWidth_21d	float	interpolated 21 day market vwidth
98	vWidth_42d	float	Interpolated 42 day market vwidth
99	vWidth_63d	float	Interpolated 63 day market vwidth
100	vWidth_84d	float	Interpolated 84 day market vwidth
101	vWidth_105d	float	Interpolated 105 day market vwidth
102	vWidth_126d	float	Interpolated 126 day market vwidth
103	vWidth_189d	float	Interpolated 189 day market vwidth
104	vWidth_252d	float	Interpolated 252 day market vwidth
105	vWidth_378d	float	Interpolated 378 day market vwidth
106	vWidth_504d	float	Interpolated 504 day market vwidth
107	vSlope_5d	float	Interpolated 5 day atm vol slope
108	vSlope_10d	float	Interpolated 10 day atm vol slope
109	vSlope_21d	float	Interpolated 21 day atm vol slope
110	vSlope_42d	float	Interpolated 42 day atm vol slope
111	vSlope_63d	float	Interpolated 63 day atm vol slope

112	vSlope_84d	float	Interpolated 84 day atm vol slope
113	vSlope_105d	float	Interpolated 105 day atm vol slope
114	vSlope_126d	float	Interpolated 126 day atm vol slope
115	vSlope_189d	float	Interpolated 189 day atm vol slope
116	vSlope_252d	float	Interpolated 252 day atm vol slope
117	vSlope_378d	float	Interpolated 378 day atm vol slope
118	vSlope_504d	float	Interpolated 504 day atm vol slope
119	eCnt_5d	byte	number of expected earnings events
120	eCnt_10d	byte	number of expected earnings events
121	eCnt21d	byte	number of expected earnings events
122	eCnt_42d	byte	number of expected earnings events
123	eCnt_63d	byte	number of expected earnings events
124	eCnt_84d	byte	number of expected earnings events
125	eCnt_105d	byte	number of expected earnings events
126	eCnt_126d	byte	number of expected earnings events
127	eCnt_189d	byte	number of expected earnings events
128	eCnt_252d	byte	number of expected earnings events
129	eCnt_378d	byte	number of expected earnings events
130	eCnt_504d	byte	number of expected earnings events
131	timestamp	datetime(6)	update timestamp

Options Surface Grid EOD

This table contains a live gridded (interpolated) censored implied volatility surface. Each record contains standardized live and prior period implied volatilities at standardized skew points for a standardized days-to-expiration value.

For futures options, index options, and ETF options, all eMoves are assumed to be zero and live ATM values are used instead of censored ATM values.

Order	Field	DataType	Comment
1	ticker_ts	enum	('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX')
2	ticker_tk	varchar(12)	Ticker
3	days	short	days to expiration [5, 21, 42, 63, 84, 105, 126, 189, 252, 378, 504]
4	date	DateTime	Trading Date and Time
5	SecurityID	long	Security ID
6	tradingDate	Date	DateKey
7	tradingSession	enum	('None','RegularMkt','PreMkt','PostMkt','PostMktETF','NextDay')
8	eMove	float	Implied earnings move (from LiveSurfaceTerm.eMove)
9	eMoveHist	float	Historical earnings move (from LiveSurfaceTerm.eMoveHist)
10	volD40	float	xde = -40
11	volD30	float	xde = -30
12	volD20	float	xde = -20
13	volD10	float	xde = -10
14	volATM	float	xde = 0
15	volU10	float	xde = +10
16	volU20	float	xde = +20
17	volU30	float	xde = +30
18	volU40	float	xde = +40
19	vWidth	float	atm volatility width (Live)
20	loYears	float	LiveSurfaceCurve.years before days [-1 = none]
21	hiYears	float	LiveSurfaceCurve.years after days [-1 = none]
22	timestamp	datetime	surface fit timestamp

Reference Data

SpiderRock reference data and VOL2G data incorporates all earnings and dividends data.

This includes:

- Earning Dates
- Earnings Counts
- Earnings Forecasts
- Dividend Forecasts
- Corporate Action Price Adjustments
- Security ID

Ticker Definition Hist Map (tbltickerefinitionhistmap_eqt)

This data can be used to map out all underlying tickers.

Order	Field Name	Data Type	Comment
1	ticker_at	enum('None','EQT','IDX','BND','CUR','COM','FUT','SYN','WAR','FLX','MUT','SPD','MM','MF','COIN','TOKEN')	Asset type
2	ticker_ts	enum('None','SR','NMS','CME','ICE','CFE','CBOT','TD','NYMEX','COMEX','RUT','CBOE','ISE','ARCA','NYSE','OTC','GDAX','BSTAMP','KRAKEN','TST','USR1','USR2','USR3','NSDQ','MFQS','PHLX','MIAX','TSE','DJI')	Source
4	ticker_tk	varchar(60)	traded ticker
5	securityDesc	varchar(70)	Security Name
9	tradingDate	date	reference date
10	securityID	varchar(12)	SecurityID (EDI, global)
13	openPrice	double	Open
14	High	double	High
15	Low	double	Low
16	closePrice	float	Close (SR)

19	Currency	varchar(3)	Currency (price)
20	Volume	int	Daily Volume (SR)
22	SharesOutstanding	int	self-explanatory (SR)
23	primaryExch	varchar(6)	primary exchange (SR)
26	securityType	varchar(3)	Security Type (EDI)
28	SIC	varchar(10)	Standard Industrial Classification
29	ISIN	varchar(12)	ISIN
30	GICS	varchar(8)	Global Industry Classification Standard
31	CntryofIncorp	varchar(2)	Country of Incorporation
32	ExchgCD	varchar(6)	Exchange Code
33	ExchgCntry	varchar(2)	Exchange Country
34	BbgCompositeGlobalID	varchar(12)	Bloomberg CompositeID
35	BbgCompositeTicker	varchar(40)	Bloomberg Comp Ticker
36	BbgExchangeTicker	varchar(40)	Bloomberg Exch Ticker

37	Mic	varchar(4)	Market Id Code (EDI)
38	timestamp	datetime	last updated

Ticker History Table (tbltickerhistoryv3)

Order	Field Name	Data Type	Comment
1	date	datetime	trade date
2	securityID	bigint	securityID (EDI)
3	dn	int	trading date cardinal (1 = '1996-01-01')
4	ticker	varchar(12)	ticker
5	open	float	
6	high	float	
7	low	float	
8	close	float	
9	closePr	double	previous close (adjusted div, splits, ...)
10	volume	int	daily traded volume
11	shares	int	shares outstanding
12	ccVar	double	Close-Close daily variance
13	hlVar	double	High-Low daily variance (High, Low including `closePr`)

14	rvVar	decimal(2,1)	N.A for now
15	earnFlag	varchar(2)	earning Date flag: '0' = is earning date, '-1/1' = before/after earning date
16	expiryCount	tinyint unsigned	number of expiries
17	hEMove	float	historical realized average earnings move
18	iEMove	float	forward implied volatility based earning move
19	atmCenI_decay	float	*** all fields here and below extracted from SurfaceFixedTermHist table (see for docs).
20	atmCenI_st	float	
21	atmCenI_lt	float	
22	atmCenI_5d	float	

23	atmCenI_21d	float	
24	atmCenI_42d	float	
25	atmCenI_63d	float	
26	atmCenI_84d	float	
27	atmCenI_105d	float	
28	atmCenI_126d	float	
29	atmCenI_189d	float	
30	atmCenI_252d	float	
31	atmCenI_378d	float	
32	atmCenI_504d	float	
33	atmCenH_st	float	
34	atmCenH_lt	float	
35	atmCenH_decay	float	
36	atmCenH_5d	float	
37	atmCenH_21d	float	
38	atmCenH_42d	float	
39	atmCenH_63d	float	
40	atmCenH_84d	float	
41	atmCenH_105d	float	
42	atmCenH_126d	float	
43	atmCenH_189d	float	
44	atmCenH_252d	float	

45	atmCenH_378d	float	
46	atmCenH_504d	float	
47	nEarnCnt	int	
48	nEarnCnt_5d	int	
49	nEarnCnt_21d	int	
50	nEarnCnt_42d	int	
51	nEarnCnt_63d	int	
52	nEarnCnt_84d	int	
53	nEarnCnt_105d	int	
54	nEarnCnt_126d	int	
55	nEarnCnt_189d	int	
56	nEarnCnt_252d	int	
57	nEarnCnt_378d	int	
58	nEarnCnt_504d	int	
59	totalReturn	double	daily return adjusted for corporate actions

Records Missing and Incomplete Dates

The following tables identify dates where data is either incomplete or missing for the following data sets for Trading Days.

Options Closing Marks Hist

Date	Market Close Time	Data Set	Issue
2016-07-01	15:00	Option Close Mark	No data
2016-07-12	15:00	Option Close Mark	No data
2016-07-14	15:00	Option Close Mark	No data
2017-01-13	15:00	Option Close Mark	No data
2017-02-03	15:00	Option Close Mark	No data
2017-02-07	15:00	Option Close Mark	No data
2017-04-17	15:00	Option Close Mark	No data
2017-05-12	15:00	Option Close Mark	No data
2018-12-24	12:00	Option Close Mark	half day; data was recorded after the close
2019-07-03	12:00	Option Close Mark	half day; data was recorded after the close