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2014 RFP Symposium

UNDERSTANDING

Today's Selection Process

MAY 19
2014

New York Hilton Midtown | New York City

Seeing All Sides of the Database

- Quarterly Update Cycle
- Case Study
- Educating Sales & Investments

Objective of Database Loading

Databases are used by clients and consultants to approve products for inclusion in new manager searches or to review existing managers for retention of assets.

The objective of populating databases is to be included in as many screens/searches of the product's asset class by maintaining robust profiles.

We seek to achieve the objective by:

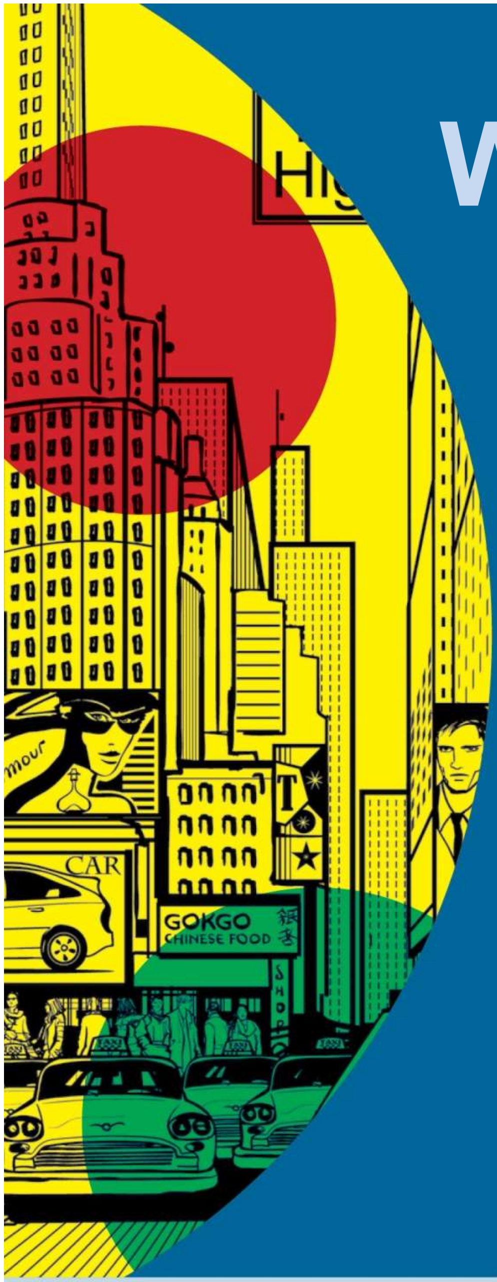
- Populating assets, performance, characteristics, and product style
- Being categorized in correct universes
- Timely reporting of quarterly information
- Conducting periodic reviews of full profiles

Databases searches are an inclusionary process

Consultants want a wide variety of managers to review at the next stage.

Quarterly Updating

- What /Where
- How
- When
- Challenges



What we load - Strategy

Performance
- GIPS Composite
- Commingled fund
- Mutual fund
- SMA/WRAP

AUM & Accounts
- Strategy level
    - Tax Status
    - Client/Vehicle type
    - Client Domicile
    - Gain/loss
- Composite total

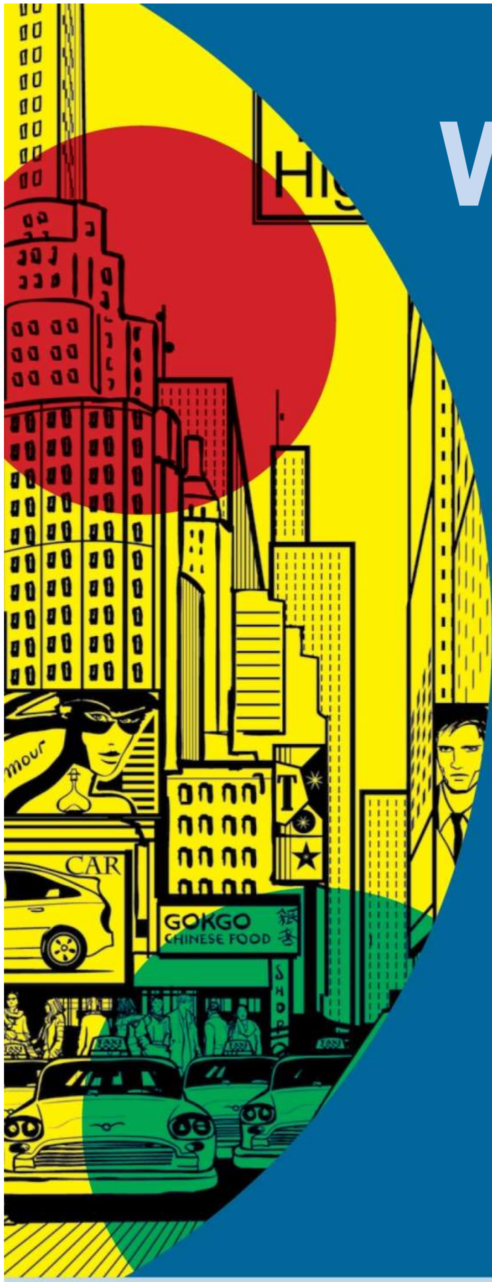
Investment Teams
- Total by role
- Top 5 IPs by name
- Gain/loss

Equity & REIT
- Characteristics
- Holdings
- Sector Allocation
- Country Allocation

Fixed Income
- Characteristics
- Maturity Allocation
- Sector Allocation
- Country Allocation

Qualitative Data
- Language
- Classification fields
- Ranges
- Vehicles and Fees

What we load - Firm



AUM & Accounts
- Tax Status
- Client/Vehicle type
- Client Domicile
- Gain/loss

Investment Professionals
- Total by role
- Gain/loss

Qualitative Data
- Language
- Classification fields
- Disclosures

Where we load

Database	Region	Type	Priority	Invesco US Rank	# of Strategies Maintained
eVestment	Global	Third Party	Y	1	70
Mercer GIMD	Global	Consultant	Y	2	57
M'Star Sep Account	US	Third Party	Y	3	38
Wilshire Compass	US	Consultant	Y	4	58
Callan	US	Consultant	Y	5	27
Cambridge	Global	Consultant	Y	6	28
PSN/Informa	US	Third Party	N	7	38
Equest	US	Third Party	N	8	35
LCG PDR	US	Consultant	N	9	23
Nelson/Lipper Marketplace	US	Third Party	N	10	26
DeMarche	US	Consultant	N	11	20

Consultant

A database used internally by a consultant firm to conduct product research and determine buy ratings

Third Party

Data that is aggregated and packaged into analytics tools and sold to third parties such as consultants, plan sponsors, FA/RIAs and competitors

How we update

Our Process

• Data Gathering
  • Pull/receive reports from PMA, StatPro/Performa or IBS
  • Receive directly from Product Managers/Investment Teams

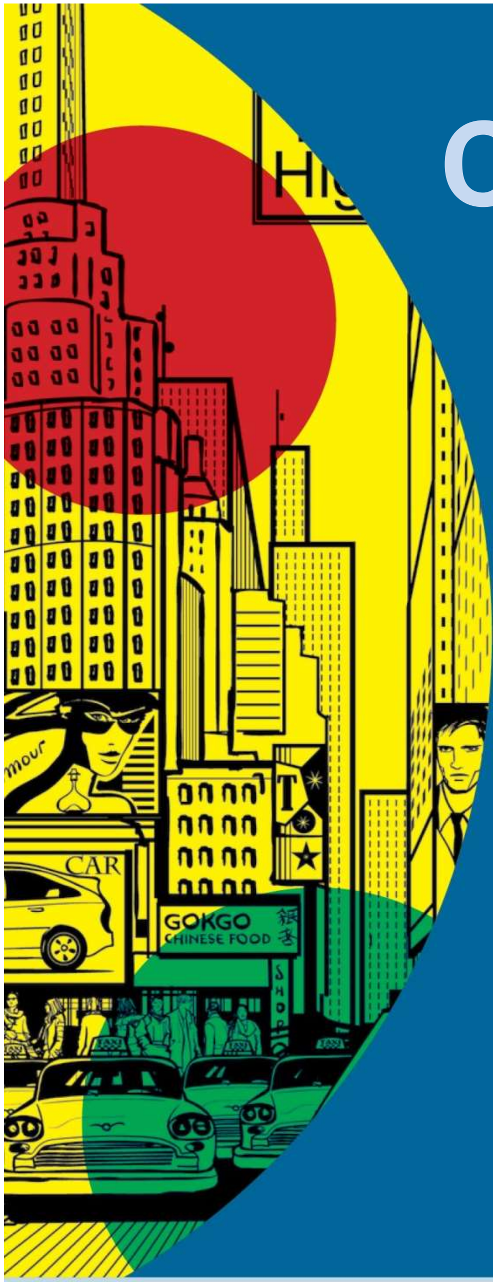
• Data Standardization
  • Consolidate data from over 80 sources in user friendly templates
  • Standardize assets and IPs with consistent attributes

• Data Loading
  • Log into each database and product profile
  • Manually input data points into system

• Ongoing review/audits

Timelines for Loading

	Industry Expectation	Our Goal	Actual
Performance	5th-10th BD	10th BD	10th BD
Equity & REIT Characteristics	10th BD	20th BD	22rd BD
Equity & REIT Holdings	10th BD	20th BD	20th BD
Strategy IPs & Gain/loss	10th BD	20th BD	18th BD
Strategy Level Assets	10th BD	25th BD	22rd BD
Fixed Income Characteristics	15th–20th BD	30th BD	22nd BD
Firm Assets Firm IPs & Gain/loss	20th BD	40th BD	31st BD 22nd BD



Challenges

- Manual data collection process in each region
- Multiple data sources for each product
- Inconsistent level of data provided depending on region
- Inconsistency with data provided in website, fact sheets and presentations
- Lack of scalability

Case Study

- CalSTRS Low Vol

Notice

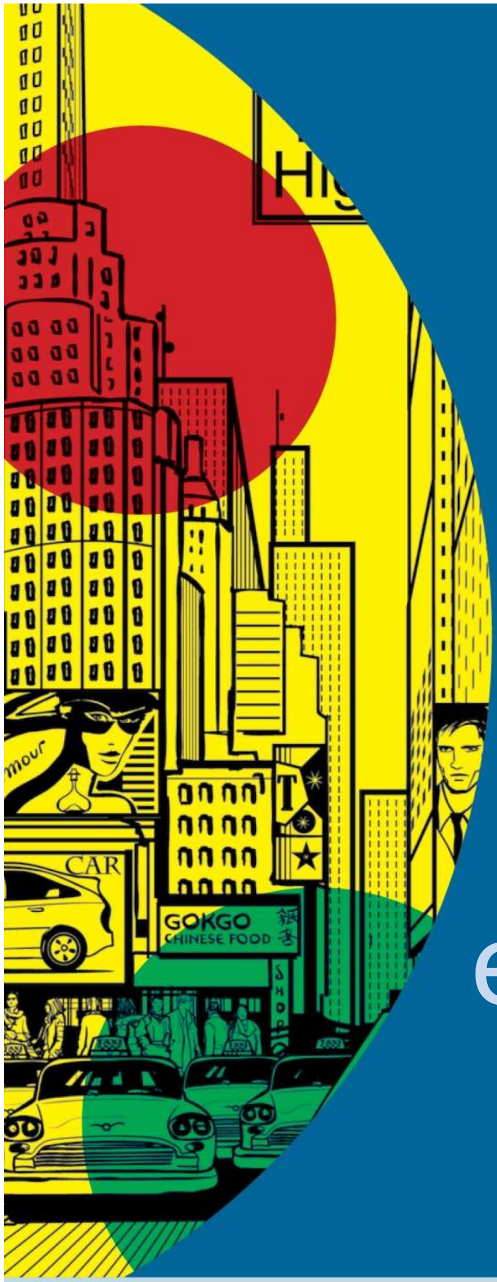
Risk-Managed Equity – Low Volatility Equity and Covered Call Strategies
ALTERNATIVE SOLICITATION PROCESS ASP 5000000077
Notice to Prospective Managers

June 27, 2013

Qualified Investment managers are invited to review and respond to the California State Teachers' Retirement System (CalSTRS), Alternative Solicitation Process (ASP), entitled Risk-Managed Equity - Low Volatility Equity and Covered Call Strategies, ASP Number 5000000077. To participate, prospective managers must comply with the instructions found herein.

This solicitation document is posted on www.CalSTRS.com and www.BidSync.com. Prospective Proposers must ensure their data is correctly uploaded into the eVestment Alliance manager database by no later than July 19, 2013, at 5:00 p.m., Pacific Time (PT). All fund information should be current through April 30, 2013. eVestment Alliance can be reached at (866) 408-3273 or at support@evestment.com.

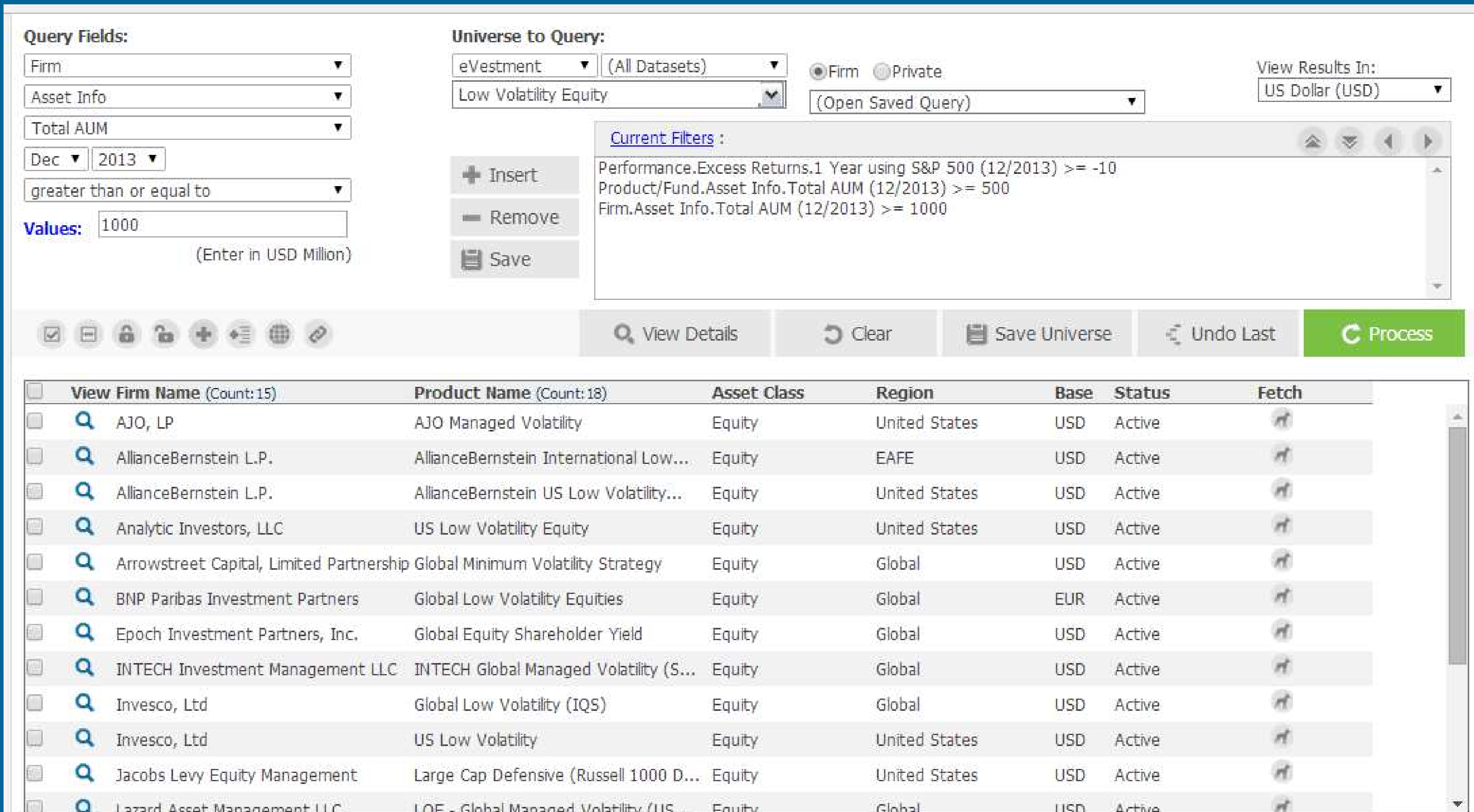
After July 19, 2013, CalSTRS will begin screening to determine the most qualified candidates. Only those candidates whose fund information is uploaded into the eVestment Alliance manager database by the date indicated will be considered.



Seeing all sides of the database: A Day in the Life of a Database Consultant

eVestment Search Activity

eVestment Users can Query on any combination of thousands of data points and calculations – this Query reduced products in the Low Volatility Equity universe from 92 down to 18



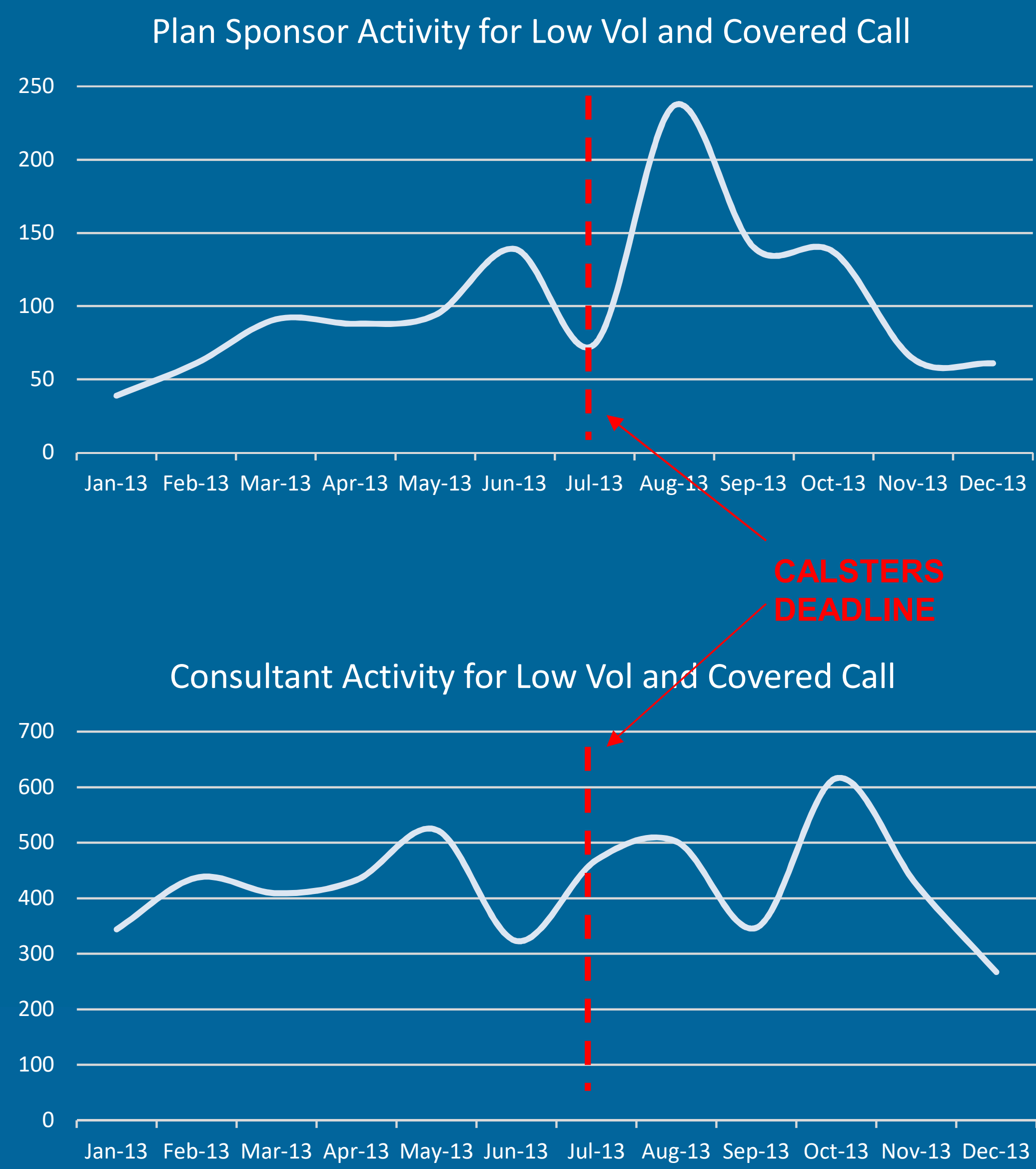
View	Firm Name (Count: 15)	Product Name (Count: 18)	Asset Class	Region	Base	Status	Fetch
	AJO, LP	AJO Managed Volatility	Equity	United States	USD	Active	
	AllianceBernstein L.P.	AllianceBernstein International Low...	Equity	EAFE	USD	Active	
	AllianceBernstein L.P.	AllianceBernstein US Low Volatility...	Equity	United States	USD	Active	
	Analytic Investors, LLC	US Low Volatility Equity	Equity	United States	USD	Active	
	Arrowstreet Capital, Limited Partnership	Global Minimum Volatility Strategy	Equity	Global	USD	Active	
	BNP Paribas Investment Partners	Global Low Volatility Equities	Equity	Global	EUR	Active	
	Epoch Investment Partners, Inc.	Global Equity Shareholder Yield	Equity	Global	USD	Active	
	INTECH Investment Management LLC	INTECH Global Managed Volatility (S...	Equity	Global	USD	Active	
	Invesco, Ltd	Global Low Volatility (IQS)	Equity	Global	USD	Active	
	Invesco, Ltd	US Low Volatility	Equity	United States	USD	Active	
	Jacobs Levy Equity Management	Large Cap Defensive (Russell 1000 D...	Equity	United States	USD	Active	
	Lazard Asset Management LLC	LOF - Global Managed Volatility (US...	Equity	Global	USD	Active	

- From July 20th to December 31st 2013 there were over 2,500 screens for Low Vol and Covered Call strategies in the eVestment database.

- Following the July 19th deadline, profile views for Low Vol and Covered Call strategies reached an all-time high (731).

- Profile Views for these strategies increase 21% in August, September and October compared to the previous three months.

- Profile views by institutional investors for these strategies **increased over 300%** from July to August

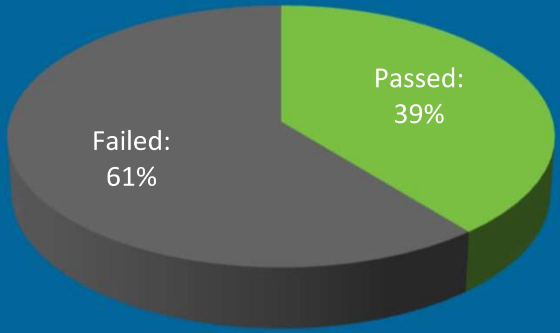


Plan Sponsor Search Activity for Low Vol and Covered Call Strategies (July 20 – Dec 31)

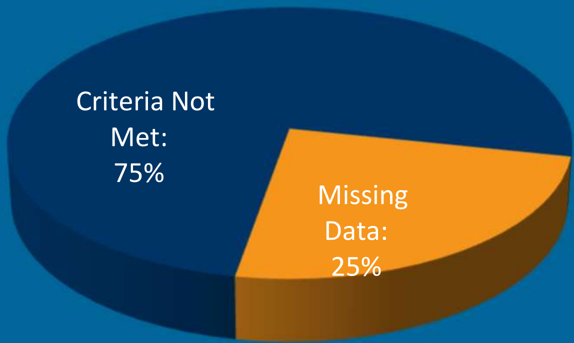
Search Summary

Total Searches:	1,019
Passed:	399
Failed:	620
Criteria Not Met:	468
Missing Data:	152
Total Fields Searched:	21,523
Passed:	9,111
Failed:	12,412
Criteria Not Met	8,631
Missing Data	3,781

Pass vs. Fail



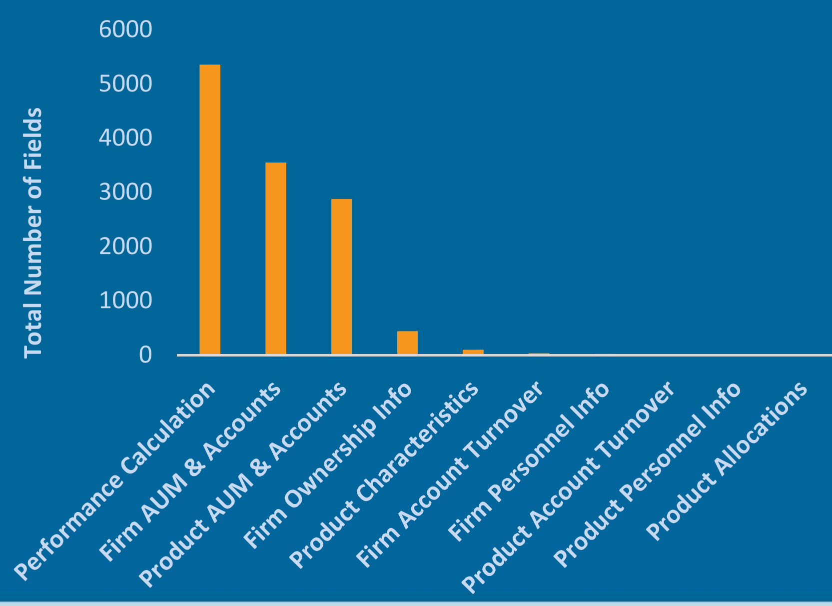
Failed Searches



Plan Sponsor Search Activity for Low Vol and Covered Call Strategies (July 20 – Dec 31)

Top Searched Products by Plan Sponsors

Top Searched Sections by Plan Sponsors



Top Searched Data Points by Plan Sponsors

Data Section: Data Point	Count
Performance: Excess Returns 1 Year	4041
Product AUM & Accounts: Total AUM	3030
Firm AUM & Accounts: Total AUM	2935
Performance: Returns 3 Years	1395
Performance: Information Ratio 3 Years	1213
Performance: Standard Deviation 3 Years	1090
Performance: Sharpe Ratio 3 Years	1047
Firm AUM & Accounts: Tax-Exempt Accounts	846
Performance: Excess Returns 2 Year	798
Performance: Excess Returns 3 Year	656
Performance: Returns 5 Years	394
Firm Ownership Info: % Employee Owned	385
Firm Ownership Info: Total % Minority Owned	291
Performance: Excess Returns 5 Year	259
Performance: Excess Returns 4 Years	246
Performance: Tracking Error 3 Years	217
Performance: Information Ratio 5 Years	214
Product AUM & Accounts: Account Size: $100-500 mil	176
Product AUM & Accounts: Account Size: > $500 mil	168
Product AUM & Accounts: Tax-Exempt Accounts	168
Performance: Returns 1 Year	138
Performance: Information Ratio 7 Years	137
Performance: Returns 7 Years	135
Performance: Information Ratio 10 Years	118
Product Characteristics: Active Share	106

Top Searches including Criteria by Plan Sponsors

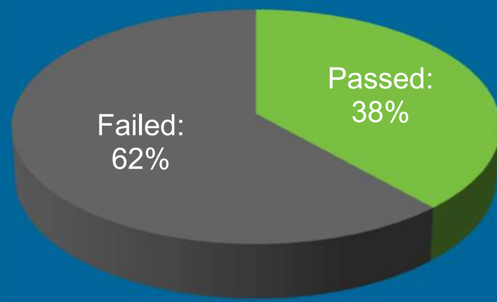
Data Section: Data Point: Criteria	Count
Performance: Excess Returns 1 Year > -10	3612
Product AUM & Accounts: Total AUM > 500	1311
Firm AUM & Accounts: Total AUM > 1000	1122
Performance: Returns 3 Years = Data Provided	1048
Performance: Standard Deviation 3 Years = Data Provided	1048
Performance: Sharpe Ratio 3 Years = Data Provided	1002
Performance: Information Ratio 3 Years = Data Provided	1002
Firm AUM & Accounts: Tax-Exempt Accounts >= 1	839
Product AUM & Accounts: Total AUM >= 100	727
Firm AUM & Accounts: Total AUM >= 2000	668
Performance: Excess Returns 2 Year <> 0	294
Firm AUM & Accounts: Total AUM >= 1000	280
Performance: Excess Returns 3 Year <> 0	242
Firm AUM & Accounts: Total AUM >= 1500	240
Product AUM & Accounts: Total AUM > 1000	204
Performance: Excess Returns 1 Year <> 0	197
Performance: Excess Returns 2 Year >= 0	191
Product AUM & Accounts: Total AUM >= 500	173
Product AUM & Accounts: Account Size: $100-500 mil >= 100	168
Product AUM & Accounts: Account Size: > $500 mil >= 500	168
Firm Ownership Info: % Employee Owned >= 0.50	160
Performance: Excess Returns 3 Year >= -2	154
Performance: Excess Returns 3 Year >= .25	154
Performance: Returns 3 Years > Median Percentile Rank	120

Consultant Search Activity for Low Vol and Covered Call Strategies (July 20 – Dec 31)

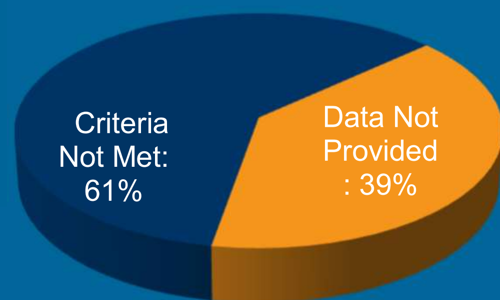
Search Summary

Total Searches:	1,538
Passed:	590
Failed:	948
Criteria Not Met:	574
Missing Data:	374
Total Fields Searched:	34,961
Passed:	13,147
Failed:	21,814
Criteria Not Met	9,926
Missing Data	11,888

Pass vs. Fail

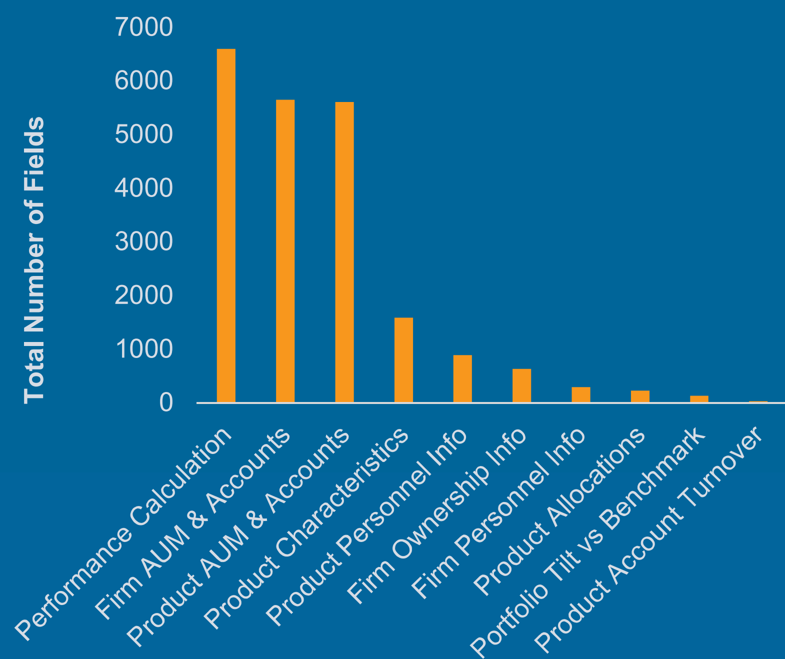


Failed Searches



Top Searched Products by Consultants

Top Searched Sections by Plan Consultants



Top Searched Data Points by Consultants

Data Section: Data Point	Count
Product AUM & Accounts: Total AUM	5636
Firm AUM & Accounts: Total AUM	5439
Performance: Returns 3 Years	2196
Performance: Returns 5 Years	1483
Performance: Excess Returns 1 Year	1134
Performance: Excess Returns 5 Year	946
Firm Ownership Info: Total % Minority Owned	746
Performance: Excess Returns 3 Year	724
Performance: Returns 1 Year	723
Performance: Beta 3 Years	603
Performance: Excess Returns 7 Year	581
Product Characteristics: Current # of Holdings	526
Performance: Information Ratio 5 Years	481
Performance: Batting Average 5 Years	454
Product Characteristics: Current Dividend Yield	442
Performance: Batting Average 7 Years	442
Performance: Information Ratio 7 Years	442
Performance: Returns 4 Years	411
Product Personnel Info: Portfolio Mgrs Lost	408
Performance: Returns 10 Years	400
Performance: Returns Calendar Year	400
Product Characteristics: Active Share	396
Product Personnel Info: Primary Office Location - City	327
Product Allocations: Consumer Disc.	323
Performance: Standard Deviation 5 Years	318

Top Searches including Criteria by Consultants

Data Section: Data Point: Criteria	Count
Product AUM & Accounts: Total AUM > 500	1045
Firm AUM & Accounts: Total AUM > 1000	1022
Performance: Excess Returns 1 Year >= -10	1011
Performance: Returns 3 Years > Median Percentile Rank	544
Performance: Information Ratio 5 Years >= .25	442
Performance: Excess Returns 5 Year >= 1.25	442
Performance: Batting Average 7 Years >= 0.5	442
Performance: Batting Average 5 Years >= 0.5	442
Performance: Information Ratio 7 Years >= .25	421
Performance: Returns 4 Years > 75th Percentile Rank	408
Performance: Excess Returns 7 Year >= 1.25	400
Performance: Beta 3 Years < .8	375
Firm AUM & Accounts: Total AUM > 500	344
Product AUM & Accounts: Total AUM >= 250	343
Firm AUM & Accounts: Total AUM >= 5000	327
Product AUM & Accounts: Total AUM >= 500	326
Product AUM & Accounts: Total AUM >= 100	326
Product AUM & Accounts: Total AUM >= 5000	310
Product Personnel Info: Portfolio Mgrs Lost <= 1	288
Firm Personnel Info: Total Employees >= 0	278
Firm AUM & Accounts: Total AUM > 200000	274
Product AUM & Accounts: Total AUM >= 1000	272
Product Personnel Info: Avg Yrs w/ Firm: PMs >= 3	268
Product Allocations: Autos & Trans. < .05	264
Firm AUM & Accounts: Total AUM > 9999	264

Educating Sales & Investments

- Sample slides

Principles for an effective Database profile

Initial Load

- Commit to ongoing support – once it is loaded, it cannot be removed
- Agree upon data sources for quarterly updating
- Review the categorization fields (asset class, style) and work with consultant to ensure product is in appropriate/relevant databases

Quantitative Information

- Performance – present the GIPS composite as main return stream but supply with funds as needed
- Characteristics & Holdings – source system must match source for other material
- Assets and gain/loss - monitor this information even if ownership for maintaining elsewhere

Qualitative Information

- Categorization fields – within the database framework, are we best positioned to screen for searches?
- Investment Professionals – how do we list the team members knowing once it is in the system, we cannot remove them or revisit history
- Process language – adjust stock information to fit word count limits
- Fee Schedules & Account Minimums – communicate changes and adjust in system

Ongoing Review/Audit

- Make time to review profiles
    - *It is being accessed daily by competitors, plans, and consultants*
- As changes occur, keep databases up to date
- Review competitor profile

Meeting with Consultants

- Make time to review database profile prior to the meeting
    - *Consultant will have information in front of them, shouldn't you?*
    - *Does the data match the presentation – if not, do I understand why?*
- Understand holes/missing data in profiles
    - *Is it too early to load firm level assets?*
    - *Do we <u>not</u> answer a field if we don't fit in the allocated buckets?*
- Ask consultants how they use the data, what areas are most important and focus efforts on improving this information

Silly but effective

- Databases are the match.com stage:
  - Our firm maintains a firm profile, as well as profiles for individual strategies
  - Plans & Consultants review manager information and search based on their needs:
    - Characteristics
    - Performance
    - Assets & gain/loss
    - Personnel & process

Silly but effective

RFPs are the eHarmony stage :

- Plans and their consultants put together questions based on the mandate and type of manager they want
- Invesco responds by answering the required questions and providing supplemental information (Attribution, Form ADV, Annual Report, SOC 1 Report, Code of Ethics)

RFPs show the client in **black and white** how easy you are to deal with by how you answer questions

Silly but effective

- Finals - the Dating Game stage:
  - If we pass the first two stages, we make it to “the Show”
  - We, like the bachelors, answer questions from the plan and consultant