vrp_research_class

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/home/jirong/Desktop/github/volatility_risk_premium/vrp_research_class.py

```
Created on Thu Dec 17 22:39:24 2020

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```

Modules

datetime	pandas	re	yfinance
datetime	matplotlib.pyplot	time	
numpy	quandl	util	
os	random	yaml	

Classes

builtins.object

vrp_research

class **vrp_research**(builtins.object)

```
vrp_research(vix_cap_range, snp_cap_range, num_samples_per_period, min_sample_size, prop_block_bootstrap, days_block, startin
```

Methods defined here:

__init__(self, vix_cap_range, snp_cap_range, num_samples_per_period, min_sample_size, prop_block_bootstrap, days_block, starting_index)

```
Constructor for VRP class

:param data: data-frame holding data and signals
:param vix_cap_range: list of vix_cap for continuous signals
:param snp_cap_range: list of snp_cap for continuous signals
:param num_samples_per_period: num_samples_per_period in walk forward block bootstrapping
:param min_sample_size: minimum sample size in each block bootstrap sample in walk forward block bootstrapping
:param prop_block_bootstrap: Proportion of dataset used for block bootstrapping
:param days_block: Number of days used in each out-of-sample block.
:param starting_index: Starting index in data-frame for whole analysis. Can be randomized to avoid butterfly effect.
:return: returns VRP class
```

compute_perf_mult_rule_single_period(self)

```
Compute performance of across all periods (in-sample)
```

compute_perf_single_period(self, period)

```
Compute performance in single period (in-sample)
```

extract_period(self, period, bootstrap_index)

```
Extract single period
```

generate_boostrap_periods(self)

```
Generating walk forward block bootstrap indexes
```

generate_snp_signal(self)

```
Generating signal based on lagged VIX value and S&P volatility
```

generate_vix_signal(self)

```
Generating VIX term structure signal
```

get_data(self)

```
Obtain csv data and from yfinance
```

walk_forward_compilation(self, term_snp='term', param_list=[10, 10, 10, 10, 10, 10, 20, 15])

```
Compute performance of across all periods (out-of-sample)

:param term_snp: VIX term structure or Lagged VIX/Snp Vol signals
:param param_list: Optimized parameter generated in each in-sample period
```

Data descriptors defined here:

__dict__

```
dictionary for instance variables (if defined)
```

__weakref__

```
list of weak references to the object (if defined)
```