

```

In[1]:= NormalizeData[symbol_, start_, end_] := FinancialData[symbol, {start, end}] //
Transpose@{#[[All, 1]], #[[All, 2]] / First@#[[All, 2]]} &
WeightedMean[data_, weightList_] := Total[weightList / Total@weightList * data]
FinancialChart[symbols_, start_, end_, weightList_: Nothing] :=
Module[{lists, allDates, associationLists,
  listsWithMissing, mean, weighted, data, table, ts, headings},
  lists = NormalizeData[#, start, end] & /@ symbols;
  allDates = Table[#[1] &@@ i, {stock, lists}, {i, stock}] // Fold[Union, #] &;
  associationLists = Table[#[1] -> #2 &@@ i, {stock, lists}, {i, stock}];
  listsWithMissing = Table[Module[{association},
    association = Association@a;
    Table[k -> association[k], {k, allDates}]], {a, associationLists}];
  mean = Normal@Merge[listsWithMissing, Mean];
  weighted = If[TrueQ[weightList == Nothing], Nothing,
    Normal@Merge[listsWithMissing, WeightedMean[#, weightList] &]];
  data = listsWithMissing ~Join~ {mean, weighted};
  table = Table[Select[Values@d, NumberQ] // {Last@#, StandardDeviation@#} & //
    {#1, #2, #1 / #2} &@@# &, {d, data}];
  ts = Transpose@{Keys@#, Values@#} & /@ data;
  headings =
    symbols ~Join~ {"Mean", If[TrueQ[weightList == Nothing], Nothing, "Weighted Mean"]};
  TableForm@{DateListPlot[ts, PlotLegends -> headings,
    PlotTheme -> "Detailed", ImageSize -> Large, BaseStyle -> {FontSize -> 20},
    PlotRange -> All, PlotLabel -> DateString@end], TableForm[table,
    TableHeadings -> {headings, {"Return", "Standard Deviation", "Return/SD"}}]}
]

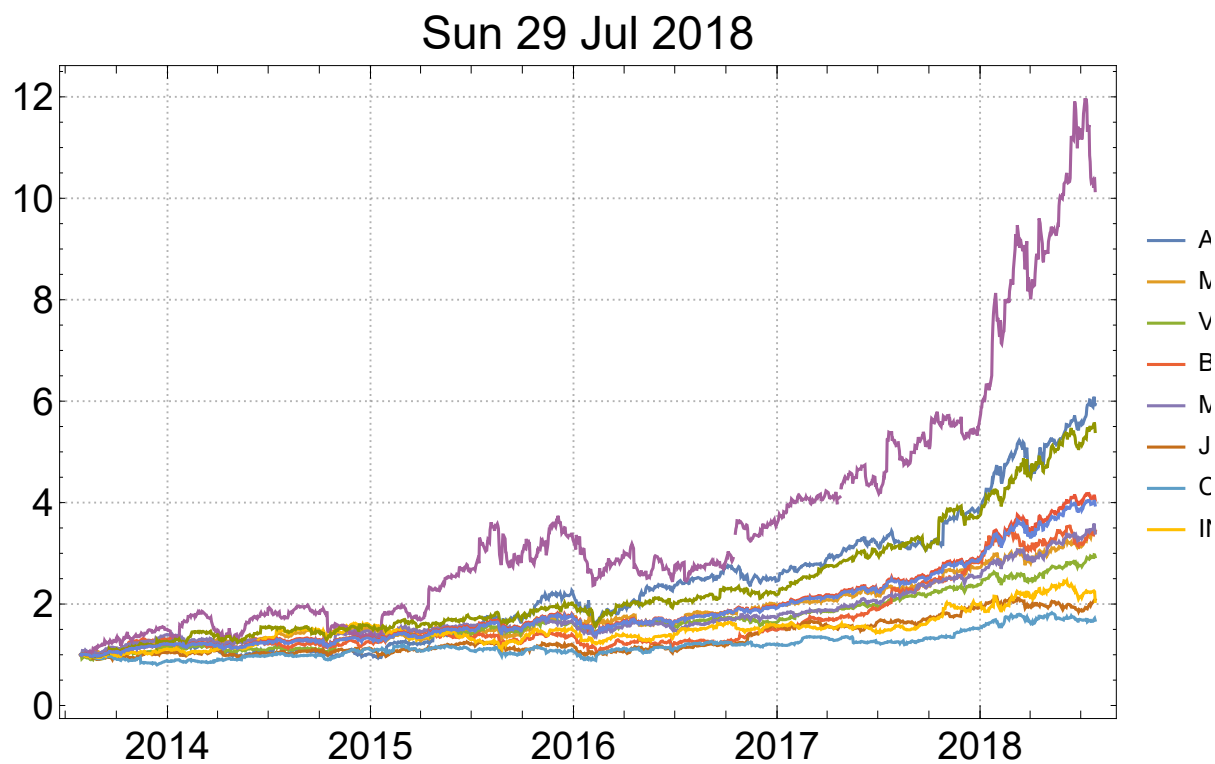
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In[4]:= weights = {5.5, 5.42, 4.96, 4.77, 4.55, 4.38, 3.69, 3.49, 3.37, 2.99};
symbols = {"AMZN", "MSFT", "V", "BA", "MA", "JPM", "CSCO", "INTC", "NFLX", "ADBE"};
start = DatePlus[Today, -Quantity[5, "Years"]];
end = Today;
FinancialChart[symbols, start, end, weights]

```

Out[8]/TableForm=

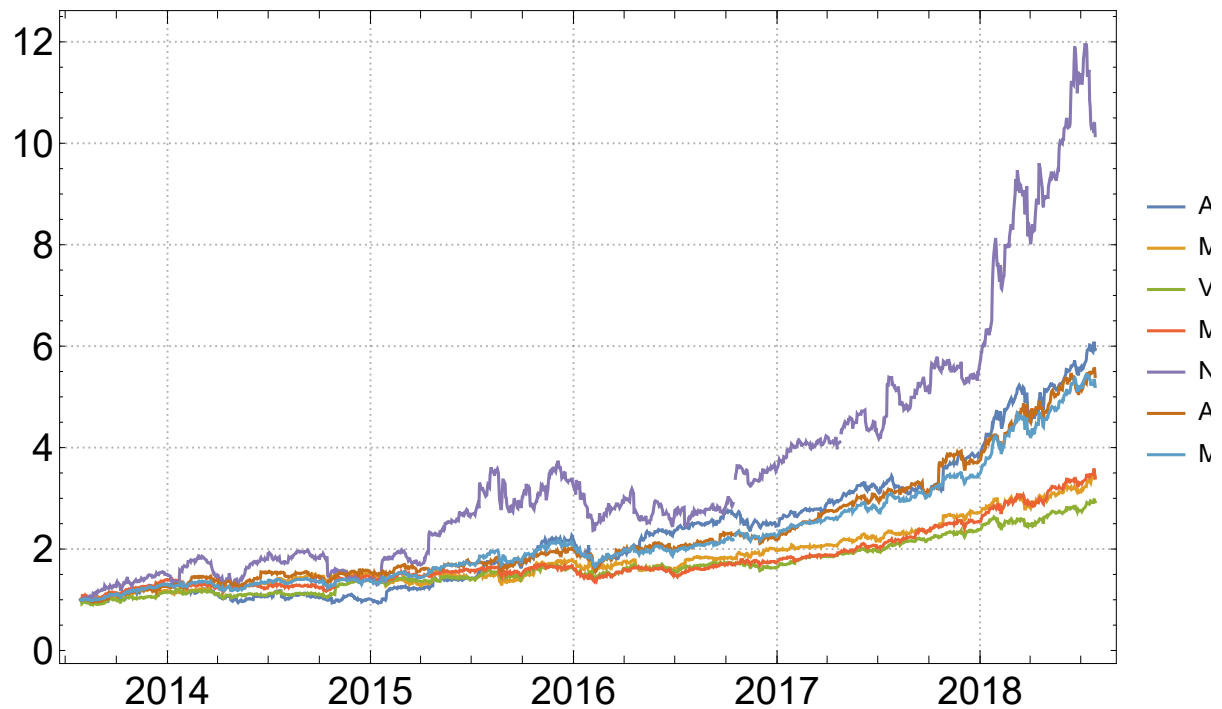


	Return	Standard Deviation	Return/SD
AMZN	5.93685	1.28334	4.6261
MSFT	3.41408	0.589292	5.79353
V	2.93192	0.498502	5.88145
BA	3.44099	0.685458	5.01999
MA	3.39922	0.577349	5.88763
JPM	2.0835	0.343896	6.05851
CSCO	1.68062	0.238414	7.04914
INTC	2.05164	0.325738	6.29842
NFLX	10.1505	2.38485	4.25625
ADBE	5.40195	1.11533	4.84336
Mean	4.04913	0.789282	5.13014
Weighted Mean	3.95236	0.762735	5.18182

```
In[9]:= symbols2 = {"AMZN", "MSFT", "V", "MA", "NFLX", "ADBE"};
FinancialChart[symbols2, start, end]
```

Out[10]//TableForm=

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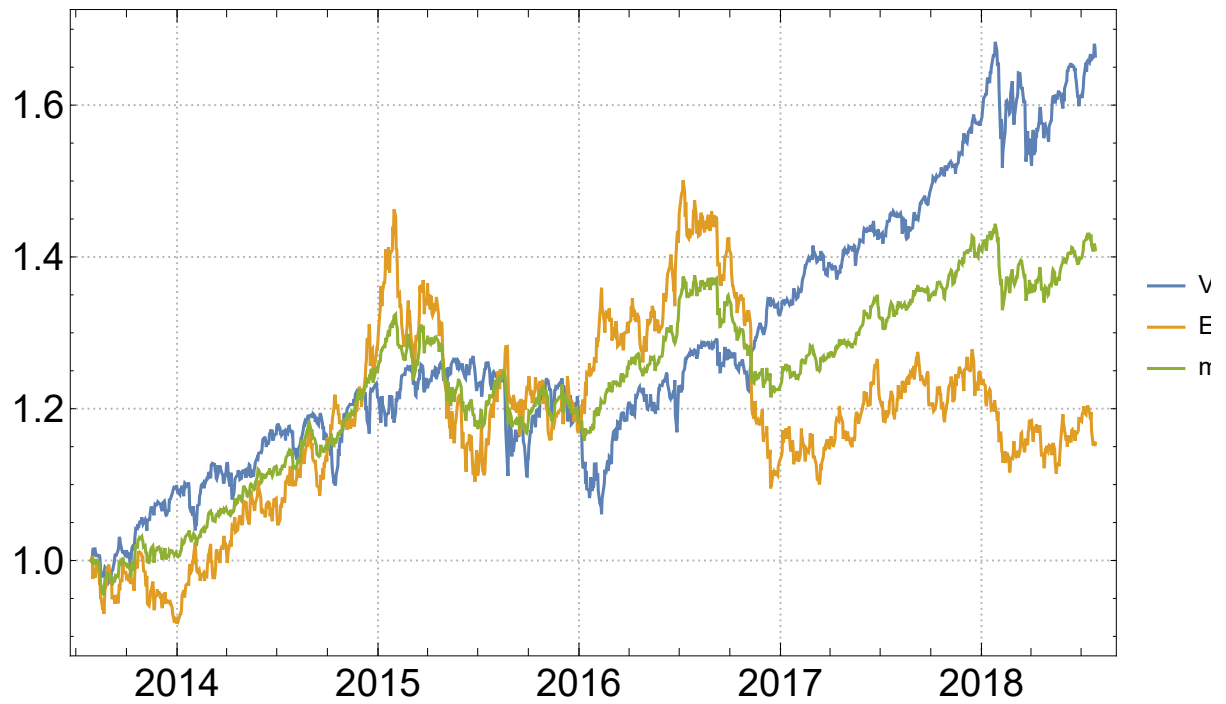
	Return	Standard Deviation	Return/SD
AMZN	5.93685	1.28334	4.6261
MSFT	3.41408	0.589292	5.79353
V	2.93192	0.498502	5.88145
MA	3.39922	0.577349	5.88763
NFLX	10.1505	2.38485	4.25625
ADBE	5.40195	1.11533	4.84336
Mean	5.20575	1.06404	4.89243

```
In[11]:= PortfolioChart[stocks_, start_, end_] := Module[{s, mean, data, symbols, std, return},
  s = NormalizeData[#, start, end] & /@ stocks;
  mean = Transpose@{s[[1]][[All, 1]], Mean /@ Transpose@(#[[All, 2]] & /@ s)};
  data = s ~Join~ {mean};
  symbols = stocks ~Join~ {"mean"};
  std = StandardDeviation@mean[[All, 2]];
  return = Last@mean[[All, 2]];
  TableForm@{DateListPlot[data, PlotLegends -> symbols,
    PlotTheme -> "Detailed", ImageSize -> Large, BaseStyle -> {FontSize -> 20},
    PlotRange -> All, PlotLabel -> DateString@end], {return, std, return/std} //
    TableForm[#, TableHeadings -> {{ "Return", "SD", "Return/SD"}, Automatic}] &
]
```

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In[12]:= PortfolioChart[{"VTI", "EDV"}, start, end]
```

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Out[12]//TableForm=
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Return	1.40959
SD	0.119416
Return/SD	11.804