

# Logarithmic Drawdown

A useful metric to look at the performance of a security is in max drawdown (in log), to account for the vast number of people who bought near the high (or owners who missed a sale there). The max drawdown is (trough value - peak value)/(peak value)

The SP & Gold are trading ~15% drawdown (in log), whereas BTC in ~120%.

Log makes things symmetric, from  $[0, \infty]$  into  $[-\infty, \infty]$

```
In[*]:= Drawdown[sec_] := Log[
$$\frac{\text{FinancialData}[sec]}{\text{Max}[\text{FinancialData}[sec, "Jan. 1, 1980"]]}]$$


In[*]:= A = {"SP500", "NDAQ", "XAU/USD", "BTC/USD"}
Out[*]= {SP500, NDAQ, XAU/USD, BTC/USD}

In[*]:= TableForm[{A, Table[Drawdown[A[[i]]], {i, 1, Length[A]}]}]
Out[*]//TableForm=


| SP500      | NDAQ      | XAU/USD | BTC/USD  |
|------------|-----------|---------|----------|
| -0.0430108 | -0.238317 | 0.      | -0.54818 |


```

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= A = {"SP500", "NDAQ", "XAU/USD", "BTC/USD"};
TableForm[{A, Table[Drawdown[A[[i]]], {i, 1, Length[A]}]}]

/ TableForm=


| SP500     | NDAQ     | XAU/USD   | BTC/USD  |
|-----------|----------|-----------|----------|
| -0.133024 | -0.12837 | -0.166935 | -1.19407 |


```