

Returns

| Time Periods | Large Equity | Mid Equity | Small Equity | Large Growth | Large Value | Small Growth | Small Value | Non-US Equity | Non-US Small | Emerg. Mkts | Int'l/Core Fixed | Long Fixed | High Yield | EM Fixed | Bank Loans | TIPS | T- Bills | Hedge FoFs | Global HFs | Multi Strat | L/S Equity | Macro HF | Relative Value | Event Driven | Distr'd HFs | Private Equity | Com. modities | REITs | Property | Inflation | |
|------------------------|--------------|------------|--------------|--------------|-------------|--------------|-------------|---------------|--------------|-------------|------------------|------------|------------|----------|------------|-------|----------|------------|------------|-------------|------------|----------|----------------|--------------|-------------|----------------|---------------|-------|----------|-----------|------|
| Strategic ¹ | 7.25% | 7.50% | 7.75% | 7.75% | 7.00% | 8.00% | 7.50% | 7.25% | 7.75% | 8.50% | 2.75% | 3.75% | 6.00% | 5.25% | 5.00% | 3.25% | 3.00% | 6.00% | 6.50% | 6.25% | 7.00% | 4.00% | 5.50% | 6.50% | 5.50% | 10.00% | 4.00% | 6.00% | 5.25% | 2.50% | |
| Cyclical ² | 6.75% | 7.00% | 7.25% | 7.25% | 6.50% | 7.50% | 7.00% | 6.75% | 7.25% | 8.00% | 2.25% | 3.00% | 5.50% | 4.50% | 4.75% | 2.75% | 2.50% | 3.00% | 4.25% | 5.00% | 4.50% | 4.00% | 4.25% | 4.75% | 4.50% | 9.50% | 4.00% | 5.50% | 4.50% | 2.00% | |
| Goldman Sachs | 7.00% | | 8.30% | | | | | 6.60% | | 11.20% | 2.90% | 4.00% | 5.90% | 5.90% | | | | | | | 5.1% | 5.1% | 5.1% | | 9.9% | 4.60% | 10.3% | | 4.20% | | |
| JP Morgan | 5.50% | 5.75% | 5.75% | 5.25% | 5.75% | | | 6.25% | | 8.00% | 3.00% | 3.25% | 5.25% | 5.25% | 5.00% | 2.75% | 2.00% | | | | | 3.75% | 4.50% | 4.75% | 7.25% | 3.75% | 6.25% | 5.25% | 2.25% | | |
| Blackrock | 4.70% | | 4.40% | | | | | 6.90% | | 7.90% | 2.20% | | 3.20% | 2.50% | 3.80% | 2.50% | | 3.70% | | | | | | | 6.30% | 3.50% | | | | | |
| Past 5 Years | 15.8% | 15.0% | 14.1% | 17.3% | 14.0% | 15.2% | 13.0% | 7.9% | 10.0% | 4.4% | 2.1% | 5.3% | 5.8% | 4.6% | 4.0% | 0.1% | 0.1% | 3.8% | 2.1% | 4.9% | 6.6% | 1.4% | 4.7% | 5.4% | 5.0% | --- | -10.2% | 9.9% | 10.4% | 1.4% | |
| Past 10 Years | 8.5% | 9.1% | 8.7% | 10.0% | 7.1% | 9.2% | 8.2% | 1.9% | 4.7% | 1.7% | 4.0% | 7.8% | 7.9% | 7.3% | 4.9% | 3.5% | 3.5% | 1.1% | -0.4% | 3.2% | 3.2% | 2.0% | 4.7% | 4.1% | 4.0% | --- | -7.2% | 7.7% | 6.2% | 1.6% | |
| Past 15 Years | 9.9% | 12.1% | 11.2% | 10.7% | 9.6% | 11.6% | 10.7% | 8.1% | 12.1% | 12.3% | 4.2% | 7.2% | 8.8% | 8.8% | 5.2% | 4.4% | 4.4% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3.0% | 10.6% | 9.0% | 2.1% |
| Past 20 Years | 7.2% | 9.5% | 7.9% | 6.9% | 7.4% | 6.7% | 8.6% | 5.3% | 8.5% | --- | 5.0% | 7.1% | 6.7% | 8.9% | 4.9% | 5.5% | 5.5% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.7% | 8.7% | 9.6% | 2.2% |
| Past 30 Years | 10.4% | 11.7% | 9.8% | 10.2% | 10.4% | 8.1% | 10.8% | 6.3% | --- | --- | 6.3% | --- | 8.4% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.0% | --- | --- |
| 2000's | -0.9% | 5.1% | 3.5% | -4.0% | 2.5% | -1.4% | 8.3% | 1.2% | 6.5% | 9.8% | 6.3% | 7.7% | 6.7% | 10.9% | 4.7% | 7.7% | 2.8% | 4.0% | 4.4% | --- | 4.2% | 5.9% | 4.3% | 5.4% | 2.7% | 8.7% | 5.1% | 10.2% | 7.3% | 2.5% | |
| 1990's | 18.2% | 15.9% | 13.4% | 20.3% | 15.6% | 13.5% | 12.5% | 7.0% | --- | 8.8% | 7.7% | 8.6% | 10.7% | --- | --- | --- | 4.9% | 12.6% | --- | --- | --- | --- | --- | --- | --- | 20.6% | 3.9% | 8.1% | 5.7% | 2.9% | |
| 1980's | 17.5% | 17.8% | 14.5% | 15.4% | 18.0% | 11.5% | 17.4% | 22.0% | --- | --- | 12.4% | 13.3% | 13.6% | --- | --- | --- | 8.9% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.7% | 12.5% | 11.6% | 5.1% |
| 1970's | 5.9% | --- | 11.5% | 4.1% | 12.2% | 6.0% | 14.6% | 8.8% | --- | --- | 7.1% | 6.0% | 5.5% | --- | --- | --- | 6.3% | --- | --- | --- | --- | --- | --- | --- | --- | --- | 21.2% | --- | --- | 7.4% | |
| 1960's | 7.8% | --- | 15.5% | 7.9% | 10.7% | 10.7% | 15.4% | --- | --- | --- | 2.9% | 1.6% | 3.0% | --- | --- | --- | 3.9% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.5% | |
| 1950's | 19.4% | --- | 16.9% | 17.6% | 22.2% | 17.7% | 20.0% | --- | --- | --- | 2.0% | 0.4% | 4.6% | --- | --- | --- | 1.9% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.2% | |
| 1940's | 9.2% | --- | 20.7% | 7.3% | 17.2% | 11.6% | 21.0% | --- | --- | --- | 3.2% | 3.0% | 10.4% | --- | --- | --- | 0.4% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.4% | |
| 1930's | -0.1% | --- | 1.4% | 1.5% | -5.5% | 7.4% | -0.3% | --- | --- | --- | 4.9% | 5.7% | 1.2% | --- | --- | --- | 0.6% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | -2.0% | |

1) "Strategic": Long-term return expectation based upon historical precedence combined with forward looking market and economic factors.

2) "Cyclical": 2-year annualized return expectation considering current price, valuation, business cycle, etc.

Standard Deviations

| Time Periods | Large Equity | Mid Equity | Small Equity | Large Growth | Large Value | Small Growth | Small Value | Non-US Equity | Non-US Small | Emerg. Mkts | Int'l/Core Fixed | Long Fixed | High Yield | EM Fixed | Bank Loans | TIPS | T-Bills | Hedge FoFs | Global HFs | Multi Strat | L/S Equity | Macro HF | Relative Value | Event Driven | Distr'd HFs | Private Equity | Com modities | REITs | Property | Inflation |
|------------------------|--------------|------------|--------------|--------------|-------------|--------------|-------------|---------------|--------------|-------------|------------------|------------|------------|----------|------------|------|---------|------------|------------|-------------|------------|----------|----------------|--------------|-------------|----------------|--------------|-------|----------|-----------|
| Strategic ¹ | 15.0% | 17.0% | 20.0% | 16.0% | 15.0% | 21.0% | 19.5% | 17.0% | 18.5% | 21.0% | 4.0% | 10.0% | 8.0% | 8.5% | 8.0% | 6.0% | 0.5% | 6.0% | 6.5% | 6.0% | 9.0% | 6.5% | 6.5% | 8.0% | 7.0% | 25.0% | 17.0% | 18.0% | 10.0% | 1.5% |
| Cyclical ² | 15.0% | 21.0% | 22.0% | 16.5% | 15.0% | 22.0% | 20.0% | 18.5% | 20.0% | 24.0% | 5.5% | 10.0% | 10.0% | 10.0% | 7.5% | 6.5% | 0.7% | 6.0% | 6.5% | 5.0% | 9.5% | 5.0% | 4.0% | 8.5% | 7.0% | 20.0% | 18.0% | 22.0% | 10.0% | 1.0% |
| Goldman Sachs | 14.4% | | 18.6% | | | | | 14.1% | | 20.8% | 3.7% | 10.9% | 8.7% | 8.4% | | | | | | | 5.1% | 5.1% | 5.1% | | 20.9% | 20.9% | 21.8% | | | |
| JP Morgan | 14.0% | 16.0% | 18.8% | 14.3% | 14.8% | | | 17.3% | | 21.5% | 3.8% | 9.5% | 8.5% | 8.3% | 7.8% | 5.5% | 0.5% | | | | | 7.5% | 7.0% | 9.0% | | 21.0% | 16.8% | 16.0% | 10.8% | 1.3% |
| Blackrock | 15.6% | | 19.7% | | | | | 17.9% | | 22.8% | 4.4% | | 8.5% | 9.6% | 8.7% | 6.1% | | 6.6% | | | | | | | | 24.3% | 15.2% | | | |
| Past 5 Years | 9.5% | 10.4% | 13.9% | 10.0% | 9.9% | 14.6% | 13.9% | 11.7% | 11.4% | 14.4% | 2.9% | 7.7% | 5.2% | 6.2% | 2.4% | 0.1% | 0.1% | --- | --- | --- | --- | --- | --- | --- | --- | --- | 12.6% | --- | 16.0% | 0.7% |
| Past 10 Years | 15.1% | 17.8% | 19.9% | 15.4% | 15.9% | 20.3% | 20.0% | 18.5% | 20.3% | 22.8% | 3.2% | 10.5% | 10.5% | 8.9% | 8.1% | 0.2% | 0.2% | --- | --- | --- | --- | --- | --- | --- | --- | --- | 23.3% | --- | 21.3% | 1.1% |
| Past 15 Years | 13.3% | 15.8% | 18.2% | 13.6% | 14.0% | 18.9% | 18.2% | 16.5% | 18.3% | 21.4% | 3.4% | 9.8% | 9.1% | 8.1% | 6.7% | 0.5% | 0.5% | --- | --- | --- | --- | --- | --- | --- | --- | --- | 21.2% | --- | 21.3% | 1.1% |
| 2000's | 16.3% | --- | 23.0% | 18.8% | 16.9% | 26.3% | 21.3% | 18.4% | 22.1% | 28.3% | 4.1% | 10.2% | 12.9% | 10.5% | 8.2% | 7.2% | 0.6% | 5.7% | 6.4% | --- | 7.5% | 9.2% | 7.9% | 6.4% | 7.7% | 13.6% | 27.7% | 26.7% | 6.5% | 1.6% |
| 1990's | 15.8% | --- | 19.8% | 18.4% | 14.9% | 24.5% | 16.4% | 18.6% | --- | 26.9% | 4.2% | 8.1% | 8.0% | --- | --- | --- | 0.4% | 9.1% | --- | --- | --- | --- | --- | --- | --- | 9.6% | 18.6% | 13.1% | 4.1% | 0.7% |
| 1980's | 19.4% | --- | 23.9% | 21.8% | 18.1% | 27.1% | 21.2% | 21.5% | --- | --- | 9.5% | 14.5% | 9.9% | --- | --- | --- | 0.9% | --- | --- | --- | --- | --- | --- | --- | --- | --- | 15.3% | 14.5% | 2.3% | 1.3% |
| 1970's | 17.1% | --- | 30.5% | 18.9% | 20.1% | 29.7% | 27.6% | 17.2% | --- | --- | 5.1% | 8.8% | 9.9% | --- | --- | --- | 0.6% | --- | --- | --- | --- | --- | --- | --- | --- | --- | 26.2% | --- | --- | 1.2% |
| 1960's | 13.1% | --- | 21.5% | 14.1% | 15.7% | 22.7% | 20.4% | --- | --- | --- | 2.9% | 5.2% | 4.7% | --- | --- | --- | 0.4% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0.7% |
| 1950's | 14.1% | --- | 14.4% | 13.7% | 19.3% | 13.6% | 16.9% | --- | --- | --- | 2.6% | 4.2% | 5.8% | --- | --- | --- | 0.2% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1.2% |
| 1940's | 17.5% | --- | 34.5% | 16.1% | 23.4% | 22.5% | 31.5% | --- | --- | --- | 2.7% | 2.1% | 11.2% | --- | --- | --- | 0.1% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3.1% |
| 1930's | 41.6% | --- | 78.6% | 35.6% | 68.0% | 64.1% | 81.0% | --- | --- | --- | 3.8% | 4.4% | 21.9% | --- | --- | --- | 0.2% | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.5% |

1) "Strategic": Long-term return expectation based upon historical precedence combined with forward looking market and economic factors.

2) "Cyclical": 2-year annualized expectations considering current price, valuation, business cycle, etc.

Historical returns are shown through 12/31/17 except for Private Equity and Property which are through 9/30/17