

# ***Index***

- American Association of Individual Investors, 25
- Annuities, 60–63
- Approximate growth-adjusted DCA formula, 74
- Arithmetic mean, 22–23
- Asset allocation strategies, 2
  
- Beta, 23, 174, 180, 181, 190
- Black Monday, 151
- Bonds, 14, 15, 70, 192
- Buy-and-hold strategy, 20, 37
  
- Capital gains tax
  - cap, 114
  - deferring, 101–107, 178
- Closed-end mutual funds, 188
- Compounding, 7, 22–23, 58, 80
- Constant-ratio plans, 2
- Constant share (CS) purchase strategy, 28, 30–36, 37–38, 48, 52, 127, 162–164, 168
- Contrarian strategies, 144, 147
- Corporate bonds, 14, 15
- Correlation coefficient, 190
  
- Deferred gains, 101–102
  - example of, 102–103, 106–107
- Distribution
  - of eight-year stock returns, 13
  - of four-year stock returns, 12
  - of market returns, 9–13
  - of one-year stock returns, 11, 18
  - of random stock returns, 124, 125
  - standard normal, 17
- Diversification, 9, 34, 169–170, 174, 175, 190
  - time, 8, 32, 37–38
  
- Dodge & Cox Stock Fund, 175
- Dollar cost averaging (DCA), 25–26, 36–37
  - definition of, 1–2, 25
  - example of, 26–28, 49, 202–214
  - fixed amount, 35–36, 63
  - growth-adjusted, 71–80
  - growth equalization of, 35–36, 56
  - internal rate of return, 28, 29
  - investment
    - frequencies, 163, 164, 166–167, 179–180
    - return and taxes, 200–202
    - targets, 57–63, 88, 199–200
    - long-term problems with, 34–36, 71
    - over five-year periods, 32–34, 49
    - over one-year periods, 30–32
    - readjustment of, 63–71, 205–213
    - spreadsheet for, 83–85
    - short-term performance of, 28
    - table, 27, 31, 33, 142
    - versus VA, 55–56, 168
- Donnelly, Barbara, 150
- Down-shifting risk, 69–71
  
- Effective annual rate, 7, 80
- Effective tax rate, 102, 105, 107, 114
- Efficient market view, 149, 164, 166
- Equity mutual funds, 169–170, 173
- ETFs, 192
- Exact growth-adjusted DCA
  - formula, 72
- Excel updates, 131, 134
- Expected compound return, 180, 190
- Expected return, xvi, 15, 18, 24, 119, 126, 180, 192
  - distribution of, 17–19
  - and risk, 13–19

## 232 Index

- Fama, Eugene, 149
- Financial calculator  
for annuity, 62  
for lump sum, 61  
for readjustment, 67  
for ten-year readjustment, 68
- Financial planners  
importance of, 192  
notes for, 186–189
- Fixed-amount rules, 34–35, 47–48
- Fixed-dollar strategies, 47–51
- Formula strategy, 1–2  
and automatic timing, 21–22  
definition of, 1  
and market timing, 19–22, 161–164  
and overreaction, 160–161
- French, Kenneth R., 149
- Frontiers of Finance*, 159
- Geometric mean, 22–23, 190
- Government bonds, 14, 15
- Growth  
adjustments, 139–142  
equalization, 35–36, 52–53, 55–56, 166  
strategies, 51–53
- Growth-adjusted strategies  
comparison of, 142  
dollar cost averaging, 71–79  
value averaging, 51–53, 88
- Guidelines, 185–86
- Head-Start VA formula, 91
- Herd mentality, avoiding, 2
- Histogram  
definition of, 10  
distribution of eight-year stock returns, 13  
distribution of four-year stock returns, 12  
distribution of one-year stock returns, 11
- Index funds, 24, 46, 167, 171–172
- Inflation, 14, 15, 38, 71, 184, 197
- Inflation adjustments to strategies, 51–52, 191, 197–199
- Internal rate of return, 28–29
- Internet. *See* Web-based investing
- Investment frequency, 162–164, 185
- IRA, 178
- Linear strategies (VA), 47–51
- Log-normal distribution, 127
- Lotus 1-2-3, 83–85, 98–99, 131, 134
- Lump-sum investments, 57–59  
example, 59–60, 61
- Markese, John, 25
- Market. *See also* Overreaction  
changing dynamic of, 167–168  
correction, 19, 151, 160  
efficiency, 164, 166  
level, 1932 figures, 45  
level, 1954 figures, 30  
parameters, 118–119, 134, 179–181  
returns  
distribution of, 9–13  
expected, 15, 119  
over time, 3–6, 8  
VA versus DCA, 55–56  
risk, 3  
and expected returns, 13–15, 17–19, 121, 180  
and standard deviation, 16, 120, 148  
timing, 9  
and formula strategies, 20–23, 161–164
- MATCH, 153–159, 161, 165–166, 167
- Mean, 22–23, 118–119
- Mean reversion, 150, 151, 156, 157, 159, 160, 162, 166, 167
- Monte Carlo simulations, 126, 129
- Mutual funds  
closed-end funds, 188  
expense ratios, 172, 173  
financial planners' notes for, 186–190  
index, 46, 171–172  
information on specific, 172–175

- to launch strategy, 192
- retirement account, 177–178, 188
- side, 176–177, 187–188
- using split investment fund, 188–189
- versus stocks, 169–171
- value path for, 178–179, 181
  - example, 181–184
- Web-based, 191–192
- Myers, Stuart C., 150, 159
- Net average cost, 41, 54
- Normal diffusion, 121
- Normal distribution, 16, 17, 121, 127, 130, 133
- No-sell value averaging, 107–111, 142–143, 185
- Overreaction, 149–168
  - data review of, 151–159
  - and mean reversion, 150–151, 159
  - why matters, 160–164
- Periodic investments. *See* Annuities and DCA
- Pooling brokers, 192
- Pure value averaging, 79, 135–138
- Quattro Pro, 131
- Randomness, 120–121, 147, 152, 166
- Random number, 131–133
- Random simulation, 123, 126, 134–147
- Random walk, 149–150, 152, 153, 159, 160–161, 165
- Rate of return. *See* Return, rate of
- Readjustment
  - of dollar cost averaging, 63–71, 75–79, 83–85
  - of value averaging, 94–95, 97–99, 184
  - of value path, 91, 92
- Retirement account, 59, 177–178, 188
- Return
  - average investment (1926–1991), 14
  - and compounding, 7, 22–23, 58, 80, 180
  - distribution of, 9–13, 17–19
    - random stock, 124, 125
  - expected, 15, 18, 119, 126, 180, 192
  - over time, 3–6, 8
  - rate of
    - after tax, 104–105, 180
    - annualizing, 7, 58–59
    - comparison of, 31, 33, 44, 47, 52–53, 136, 137, 138, 139, 141, 142, 143, 145, 146, 163, 164
    - for five-year periods, 33
    - for one-year periods, 31, 44
    - internal (IRR), 29
    - no-sell value averaging, 109
    - strategy comparisons for, 141
    - using various investment frequencies, 163, 164
    - VA versus DCA, 55–56
- Risk, 3, 189
  - and beta, 23, 174–175, 190
  - definition of, 23
  - down-shifting, 69–71
  - and expected returns, 13–15, 17–19, 180
  - premium, 190
  - and standard deviation, 17
- Riskless investments, 70
- Side fund, 176–177, 187–188
- Simulations
  - constructing, 121–122, 129–133
  - example, 122–126
  - five-year, results of, 135–144
  - twenty-year, results of, 145
  - updated, 134
  - what and how, 118–121
  - why, 117–118
- Single growth factor DCA formula, 73
- Split investment fund, 188–189
- Spread, 118
- Spreadsheet
  - dollar cost averaging
  - readjustment, 83–85
  - simulation, 129–134
  - value averaging readjustment, 97–99

## 234 Index

### Spreadsheet (*Continued*)

- Web site downloads, xvii, 84, 97
- Standard deviation, 16, 17–18, 120, 147
- Standard normal random number, 130, 131–132
- Stochastic calculus, 126
- Stock index funds, 46, 172
- Stock market (*also see below*)
  - consecutive period performance of, 153, 154, 155, 156, 157, 158
  - recent performance of, 24
  - ups and downs of, 10
- Stock price levels, 1926–89
  - monthly, 4
- Stock returns
  - distribution
    - expected future, 18–19
    - of eight-year, 13
    - of four-year, 12
    - of one-year, 11
  - historical
    - annual, 6
    - four-year periods, 8
    - monthly, 5
- Strategy comparisons, 31–33, 44–47, 52–53, 135–146, 163–164, 167–168, 193–228
- Studentized Range, 133
- Summers, Lawrence, 150
- SWITCH, 153, 159, 165
- Tax considerations
  - deferral, 80, 101–103, 114, 178
  - limiting, 111–112
  - taking advantage of, 192
  - with value averaging, 101–103, 106–108, 110–111, 178
- Telephone switch privileges, 170, 172, 178
- Time diversification, 8, 32, 37–38
- Time value of money, 28–29
- Timing, 161–164
  - automatic, 21–23
  - market, 20–23
- Transaction costs, 111–113

- Treasury bills, 14–15, 38
- Treasury bonds, 14–15, 181, 182
- Twentieth Century Select Fund, 173, 181–182
- 2006 Notes, 24, 55, 131, 134, 167, 180, 191
- Uniformly distributed random numbers, 133
- Value averaging, 39, 41–43, 53–54, 113
  - versus DCA, 55–56, 168
  - definition of, 2, 39
  - example of, 40, 50, 215–225
  - investment frequencies and, 113, 163, 164, 179–180, 185
  - long-term performance of, 47–53, 55–56, 87, 168
  - no sell, 107–108, 110–111, 185
  - readjustment, 94–95, 184, 217–219
  - readjustment spreadsheet for, 97–99
  - short-term performance of, 43, 45–46
  - tax considerations of, 101–103, 106–108, 110–111
  - updates, 167–168, 191–192
  - value path for, 87–95, 215–217
- Value path, 51, 52–53, 87, 178–180, 182–184
  - alternate method, 93–94
  - example, 181–184
  - flexible variations on, 89–92
  - formula, 88–89
  - readjusting, 91–95, 217–219
  - setting up, 87–89, 215–217
- Vanguard Index Trust, 175, 193
- Vanguard Quantitative Portfolio, 175
- Vanguard Star Fund, 173, 189
- Variability, 9, 118, 120, 126
- Variable-ratio plans, 2
- Volatility, 143–145, 148, 185–186 (*also see Risk and Variability*)
- Wall Street Journal*, 150
- Web-based investing, 167, 191–192
- Web downloads, xvii, 84, 97