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Getting a Start With Dollar-Cost Averaging

The first step is always the hardest. Individual investors taking their first steps in an investment program must also confront a sea of stock market uncertainty. Some plunge headlong into the market with all their savings. Others barely wet their feet before heading back to the safe shores of their money market funds. The problem, however, with these two all-or-nothing approaches is one of timing—the risk of entering the market at a high point in the market cycle.

Dollar-cost averaging and its variations, such as value averaging, offer investors an alternative, allowing them to ease into the market over time, which reduces the timing risk. The mechanical aspects of averaging provide an investing basics discipline, require no market forecasts and are relatively simple to initiate. Most mutual fund companies and robo-advisers offer automatic investment and exchange programs—a cruise control for your investment plan that eliminates the more routine aspects of maintaining an averaging plan. Brokerage firms can also facilitate automatic deposits, though it's up to the investor to regularly invest each contribution to the account.

The Concept

Dollar-cost averaging is a basic investing concept: Invest a fixed amount at equal intervals and continue to do so over a long period. The result is that more shares of a stock, mutual fund or exchange-traded fund (ETF) are purchased when prices are relatively low and less are purchased when prices are relatively high. This can result in lower average per-share cost over time.

Value averaging is a variation: Instead of investing a fixed amount each interval, the amount invested varies so that the total value of the investment increases by a fixed

sum or percentage each interval. If share price increases alone cause the total value of the investment to increase above the planned fixed amount, then the investor can sell shares or postpone adding to the investment.

Neither approach requires a forecast of market direction. And with both plans, the basic discipline of periodic investment during all market situations and the continuation of the plan over long investment periods—of five years, 10 years, 20 years or even longer—provides substantial benefits, not the least of which is simply getting started in an investment program in the first place. In fact, many basic investing primers tout the value of dollar-cost averaging simply because it forces you to be in the market.

Investors who should use dollar-cost averaging or value averaging include:

» Any investor with a pool of cash or periodic cash flows, such as a regular paycheck or other streams of income, who seeks to invest in a risky asset, who has a long-term investment horizon and who feels that they cannot forecast short-term moves in the market; and

» Any investor who is having difficulty finding the right moment to move into the market (or back into the market if they were temporarily out of the market).

One key to the successful use of any basic investment averaging approach is to choose an appropriate long-term horizon. In order to avoid the potential disaster of placing a substantial portion of your portfolio in risky investments at the high point of a market cycle, take a minimum of two years—investing per pay period, monthly or quarterly—to complete the move into the market. Five years is an ideal period since it can reflect a full market cycle, albeit a bit too long for many impatient investors.

Those investors without a significant pool of cash currently available but who instead have cash periodically available are spared the temptation of rushing a large sum into the market all at once. These investors are already structured for dollar-cost averaging, but without a basic investing plan they may never start an investment program.

Another consideration is the frequency of the investments. Any periodic interval could be used and, of course, any amount or value. Investing often enough over a uniform time interval is important and every pay period quarter, two months, or every month is reasonable. Investing weekly, however, is probably overkill, while waiting every six months or every year to invest is too infrequent and may defeat the basic benefits of diversifying the investments over time in an ever-changing market.

How They Work: An Example

Table 1 and Table 2 show basic investing examples of dollar-cost averaging and its more market-tuned cousin, value averaging, illustrating the structure of each investment plan and highlighting the differences. The investment used in the example is a hypothetical small-cap growth mutual fund; the time period covered is five and a half calendar years following the first investment; the investment frequency is quarterly. These two basic averaging approaches could be used to invest in individual stocks as well.

Dividend and capital gains distributions are ignored to simplify the presentation, but for investors, the reinvestment of all dividends and distributions should be part of any investment plan.

The examples use a $1,000 quarterly contribution for the dollar-cost averaging approach: $1,000 is invested each quarter at whatever the prevailing price of the security is at that time.

For the value averaging approach, a $1,000 quarterly increase in value is used: The amount invested quarterly varies such that the total value of the investment increases by $1,000 each quarter; if the share price rises enough to cause the investment to increase by more than $1,000 during the quarter, shares would be sold to hold the increase in value to $1,000 for the period. For example, in the second quarter of Year 3, the small-cap growth fund jumped from a net asset value of $7.06 per share to $8.34 per share. To keep the increase in value to $1,000, the following basic calculations must be made: At the end of the quarter, the investor held 1,274.79 shares with a net asset value of $8.34 per share before any changes, so the value of the portfolio would have been $10,632 (1,274.79 × $8.34, rounded), an increase of $1,632, or $632 more than the planned $1,000 increase. That means that 75.75 shares ($631.73 ÷ $8.34, rounded) would have to be sold.

While dollar-cost averaging is unchanging, value averaging forces sales when prices rise sharply and forces larger purchases—more shares purchased—when prices

TABLE 1

Dollar-Cost Averaging ($1,000 Invested Each Quarter in a Small-Cap Growth Fund)

Quarter	NAV ($)	Amount Invested ($)	# of Shares Bought	Total # of Shares Owned	Total Invested ($)	Total Value ($)
Y1, Q1	8.92	1,000	112.11	112.11	1,000	1,000
Y1, Q2	12.55	1,000	79.68	191.79	2,000	2,407
Y1, Q3	12.07	1,000	82.85	274.64	3,000	3,315
Y1, Q4	12.97	1,000	77.10	351.74	4,000	4,562
Y2, Q1	6.23	1,000	160.51	512.25	5,000	3,191
Y2, Q2	6.89	1,000	145.14	657.39	6,000	4,529
Y2, Q3	7.59	1,000	131.75	789.14	7,000	5,990
Y2, Q4	7.00	1,000	142.86	932.00	8,000	6,524
Y3, Q1	7.06	1,000	141.64	1,073.64	9,000	7,580
Y3, Q2	8.34	1,000	119.90	1,193.55	10,000	9,954
Y3, Q3	9.21	1,000	108.58	1,302.13	11,000	11,993
Y3, Q4	10.26	1,000	97.47	1,399.59	12,000	14,360
Y4, Q1	8.53	1,000	117.23	1,516.82	13,000	12,939
Y4, Q2	8.16	1,000	122.55	1,639.37	14,000	13,377
Y4, Q3	9.47	1,000	105.60	1,744.97	15,000	16,525
Y4, Q4	7.94	1,000	125.94	1,870.92	16,000	14,855
Y5, Q1	9.30	1,000	107.53	1,978.44	17,000	18,400
Y5, Q2	13.09	1,000	76.39	2,054.84	18,000	26,898
Y5, Q3	12.28	1,000	81.43	2,136.27	19,000	26,233
Y5, Q4	14.56	1,000	68.68	2,204.95	20,000	32,104
Y6, Q1	17.34	1,000	57.67	2,262.62	21,000	39,234
Y6, Q2	16.14	1,000	61.96	2,324.58	22,000	37,519
Y6, Q3	14.36	1,000	69.64	2,394.22	23,000	34,381

fall. For example, in the fourth quarter of Year 4 the share price of the small-cap growth fund fell to $7.94 from $9.47 in the previous quarter. That resulted in a $3,423 investment under the value averaging approach.

Although there was a much bigger price drop in the first quarter of Year 2, few shares were held at that time, so the increased investment required was less, at $3,079. With a volatile market or a volatile investment, or both, as was the case with the small-cap growth fund in Year 4, the $3,423 additional required investment was followed two quarters later, after a price run-up, by a redemption (a sale of shares) of $5,928. For a less volatile fund, the investments and redemptions would be smaller in magnitude under the value averaging approach.

The End Results

Under the value averaging approach, the ending total value will be the periodical value increase times the number of periods—in this example, $1,000 times 23 quarters, for a total ending value of $23,000. In other words, when you start the value averaging program, the ending amount is known, but the amount to be invested isn't.

TABLE 2

Value Averaging ($1,000 Quarterly Increase in Value Invested in a Small-Cap Growth Fund)

Quarter	Desired Value ($)	NAV ($)	# of Shares Bought	Total # of Shares Owned	Total Invested ($)	Total Value ($)
Y1, Q1	1,000	8.92	112.11	112.11	1,000	1,000
Y1, Q2	2,000	12.55	47.25	159.36	1,593	2,000
Y1, Q3	3,000	12.07	89.19	248.55	2,670	3,000
Y1, Q4	4,000	12.97	59.85	308.40	3,446	4,000
Y2, Q1	5,000	6.23	494.16	802.57	6,524	5,000
Y2, Q2	6,000	6.89	68.26	870.83	6,995	6,000
Y2, Q3	7,000	7.59	51.44	922.27	7,385	7,000
Y2, Q4	8,000	7.00	220.59	1,142.86	8,929	8,000
Y3, Q1	9,000	7.06	131.93	1,274.79	9,861	9,000
Y3, Q2	10,000	8.34	(75.75)	1,199.04	9,229	10,000
Y3, Q3	11,000	9.21	(4.69)	1,194.35	9,186	11,000
Y3, Q4	12,000	10.26	(24.76)	1,169.59	8,932	12,000
Y4, Q1	13,000	8.53	354.44	1,524.03	11,955	13,000
Y4, Q2	14,000	8.16	191.65	1,715.69	13,519	14,000
Y4, Q3	15,000	9.47	(131.74)	1,583.95	12,272	15,000
Y4, Q4	16,000	7.94	431.16	2,015.11	15,695	16,000
Y5, Q1	17,000	9.30	(187.16)	1,827.96	13,954	17,000
Y5, Q2	18,000	13.09	(452.86)	1,375.10	8,026	18,000
Y5, Q3	19,000	12.28	172.14	1,547.23	10,140	19,000
Y5, Q4	20,000	14.56	(173.60)	1,373.63	7,613	20,000
Y6, Q1	21,000	17.34	(162.55)	1,211.07	4,794	21,000
Y6, Q2	22,000	16.14	152.00	1,363.07	7,247	22,000
Y6, Q3	23,000	14.36	238.60	1,601.67	10,673	23,000

Under the dollar-cost averaging approach, the total value at the end of the period could be any value, but the total amount invested is equal to the number of periods times the periodic sum—in this example, 23 quarters times $1,000, for a total amount invested of $23,000. When you start the dollar-cost averaging program, the amount to be invested is known, but the ending amount isn't.

Keep in mind that the basic investing goal of value averaging is to increase the portfolio by a fixed amount each period, and it may take substantial total amounts invested to do so, conceivably much more or much less in total than the certain dollar-cost averaging sum.

Which approach works best? While either basic investing approach could dominate over any time period, value averaging probably has the edge because it is more aggressive. However, value averaging requires more monitoring, more transactions costs and, because it triggers sales, potentially more tax consequences. Value averaging can be modified so that no sales take place, with future value increases adjusted to compensate. Also, the loss potential is greater for value averaging because the total amount that is required to be invested is unconstrained.

Please note that you cannot judge which approach did best in the basic investing examples simply by looking at ending portfolio values because the amounts invested and the timing of the investments differ for the two approaches.

A Practical Approach

Mutual funds have historically been the avenue most used by individual investors for dollar-cost averaging. Fund families continue to allow investors to buy shares on an automated and scheduled basis such as is the case with workplace retirement plans like 401(k) plans.

Many robo-advisers facilitate automated investments too. Typically, investor dollars are invested in ETFs instead of mutual funds.

Automatic deposits can be set up with discount brokers. Investors will need to invest the contributions themselves. Though an extra step, it does allow for stocks and/or ETFs to be purchased instead of mutual funds.

Someone with a lump sum to invest might put the money in a money market fund or a savings account and set up an automatic exchange program with an equity fund, for example. Alternatively, they can deposit the money into a savings account and set up automatic deposits into a brokerage or robo-adviser account.

Additionally, some fund families have a systematic withdrawal plan that allows the shareholder to automatically withdraw money from their fund account. Discount brokers and robo-advisers may facilitate this as well. Check with the firm you invest with.

Dollar-cost averaging and value averaging provide a clear path for investors to follow. With the pathway marked, taking the first few steps of a basic investment plan should be that much easier. ∎

—*Charles Rotblut, CFA,* AAII Journal *editor*

*This article was adapted from "Starting an Investment Program With Dollar Cost Averaging," by John Markese (*AAII Journal, *September 1992)*