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To Wade or Plunge

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FOLLOWING A DECISION TO INVEST NEW FUNDS IN A PORTFOLIO OF RISKY ASSETS, the timing of the investment must be determined. Some investors choose to make the entire move immediately. Other investors, perhaps fearful of adverse near-term price changes, prefer an incremental approach. After an initial investment of a portion of the funds, subsequent investments follow at regular intervals. Is such a "wading" approach more sensible than immediately "plunging" into the target portfolio?

In any particular instance, it is impossible to know in advance whether plunging or wading will yield a higher return. The outcome will depend on whether asset prices decrease or increase. But the probability that plunging will beat wading can be estimated by experimenting with historical data.

Consider four portfolios: domestic equities, domestic balanced, global equities, and global balanced (Table 1). Each year, two investment-timing strategies are employed. With plunging, full investment occurs on day one. With wading, investments are made at quarterly intervals. One-quarter of the cash is invested in the target portfolio on day one, and the remainder is held in one-month Treasury bills. At the start of quarter two, one-third of the bills are exchanged for target assets. At the start of quarter three, one-half of the remaining bills are so exchanged. At the start of the final quarter, all remaining bills are sold, and the shift to the target portfolio is completed. At the end of the year, the investment-timing strategy with the higher return can be determined.

[1] Jeff Troutner of TAM Asset Management suggested this paper topic. He also proposed the descriptive terms "wading" and "plunging."

Table 1

Compositions of Domestic and Global Portfolios

Start	End	S&P 500 Index	Fama/French Large Value Index	CRSP 9-10 Index	Fama/French Small Value Index	Five-Year US Treasury Notes	MSCI EAFE Index	MSCI EAFE Value Index	Citigroup EPAC Extended Market Index	IFC Emerging Markets Investables	Citigroup 1-3 Year World Govt Bond Index
DOMESTIC EQUITY											
1927 Q1	2003 Q4	30%	30%	20%	20%	0%	0%	0%	0%	0%	0%
DOMESTIC BALANCED											
1927 Q1	2003 Q4	19.5%	19.5%	13%	13%	35%	0%	0%	0%	0%	0%
GLOBAL EQUITY											
1970 Q1	1974 Q4	21%	21%	14%	14%	0%	30%	0%	0%	0%	0%
1975 Q1	1988 Q4	21%	21%	14%	14%	0%	15%	15%	0%	0%	0%
1989 Q1	1989 Q2	21%	21%	14%	14%	0%	13.5%	13.5%	0%	3%	0%
1989 Q3	2003 Q4	21%	21%	14%	14%	0%	12%	12%	3%	3%	0%
GLOBAL BALANCED											
1970 Q1	1974 Q4	13.65%	13.65%	9.1%	9.1%	35%	19.5%	0%	0%	0%	0%
1975 Q1	1984 Q4	13.65%	13.65%	9.1%	9.1%	35%	9.75%	9.75%	0%	0%	0%
1985 Q1	1988 Q4	13.65%	13.65%	9.1%	9.1%	25%	9.75%	9.75%	0%	0%	10%
1989 Q1	1989 Q2	13.65%	13.65%	9.1%	9.1%	25%	8.775%	8.775%	0%	1.95%	10%
1989 Q3	2003 Q4	13.65%	13.65%	9.1%	9.1%	25%	7.8%	7.8%	1.95%	1.95%	10%

With the domestic portfolios, the experiments are repeated annually from 1927 through 2003. With the global portfolios, the experiments are repeated annually from 1970 through 2003. For all portfolios, rebalancing to target weights occurs quarterly.

For the domestic portfolios during the 1927-2003 period, plunging beat wading in about two-thirds of the trials (Table 2). The average one-year excess return of plunging over wading was nearly 6% for the domestic equity portfolio and about 4% for the domestic balanced portfolio (Table 3).

For global and domestic portfolios during the 1970-2003 period, plunging again beat wading in about two-thirds of the trials (Table 4). The average excess returns for plunging over wading were about 4.5% for global equity, 3% for global balanced, 5% for domestic equity, and 3.4% for domestic balanced (Table 5).

These experiments are not exhaustive and do not prove that plunging is better than wading. Examination of different portfolios over different time periods could yield different results. But the experiments reported here suggest that wading is likely to be a bad bet. More often than not, plunging will beat wading, and plunging appears to have higher expected returns. When it comes to investment timing, just take the plunge.

Table 2

Domestic Portfolios

Frequencies Where Plunging or Wading Produce Higher One-Year Returns
1927-2003

	Domestic Equity		Domestic Balanced	
Plunge	51	66.2%	53	68.6%
Wade	26	33.8%	24	31.2%
Total	77		77	

Table 3

Domestic Portfolios

Average One-Year Excess Returns of Plunging over Wading
1927-2003

	Domestic Equity	Domestic Balanced
Mean	5.91%	4.09%
Standard Deviation	12.59%	8.34%
Standard Error	1.44%	0.95%
T-stat	4.12	4.31
Probability	0.00	0.00

Table 4

Global and Domestic Portfolios

Frequencies Where Plunging or Wading Produce Higher One-Year Returns
1970-2003

	Global Equity		Global Balanced	
Plunge	23	67.6%	22	64.7%
Wade	11	32.4%	12	35.3%
Total	34		34	

	Domestic Equity		Domestic Balanced	
Plunge	23	67.6%	23	67.6%
Wade	11	32.4%	11	32.4%
Total	34		34	

Table 5

Global and Domestic Portfolios

Average One-Year Excess Returns of Plunging over Wading
1970-2003

	Global Equity	Global Balanced	Domestic Equity	Domestic Balanced
Mean	4.51%	2.98%	5.07%	3.40%
Standard Deviation	9.29%	6.32%	10.17%	6.87%
Standard Error	1.59%	1.08%	1.74%	1.18%
T-stat	2.83	2.75	2.90	2.89
Probability	0.01	0.01	0.01	0.01