

Crash Proof Your Capital: Growth Rate Averaging

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More and more, I run into clients with large amounts of maturing GICs. They don't want to take the risks associated with investing in equities or bond funds. Advisors wave charts at their clients' faces depicting the growth of \$10,000 investments to millions of dollars! They are very tempting.

Over the long term, investing in profitable and solid companies will indeed give you the best returns. However, a GIC veteran will ask the following critical questions: Can you guarantee that the markets will not have a 30% crash soon after my money is invested? or Can you guarantee that I will not lose my capital? The answer to either question is "no". There are no guarantees.

There are generally two types of cashflow:

- *Investing on a steady cashflow basis* - An example of a steady cashflow investment is dollar cost averaging. Over the long term, dollar cost averaging is one of the most common and effective ways of building up your assets.
- *Investing a lump sum amount* - My "growth rate averaging" system is suitable for large lump sum investments. It will help you to make your lump sum investment crash resistant.

The only two significant questions which need to be asked are:

1. How much money do you have?
2. How much are you willing to lose if the markets were to plunge by 30% or 40%?

If the answers to both questions are "larger than zero", then you can use the "growth rate averaging" plan very effectively. Most cautious investors can tolerate a 5% loss of their original capital in a 40% market crash.

Here is how the plan works -

- Plan your balanced portfolio, as if you were to invest all your money now.
- Decide on how much you are willing to lose from your original capital if there is a market correction. Use:

- Table 1 for 5% loss @ 30% crash
- Table 2 for 10% loss @ 30% crash
- Table 3 for 5% loss @ 40% crash
- Table 4 for 10% loss @ 40% crash

TABLE 1: CRASH PROOF YOUR CAPITAL: 5% LOSS AT 30% CRASH

(Based on \$100,000 original capital):

Step	Column A Leave this amount in money market fund, \$	Column B Invest this amount in your investment portfolio, \$	Column C Wait until investment portfolio grows to \$:
1	83,333	16,667	19,167
2	77,500	5,833 +int.	28,750
3	68,750	8,750 +int.	43,125
4	55,625	13,125 +int.	64,688
5	35,938	19,688 +int.	97,031
6	6,406	29,531 +int.	145,547
7	0	the remainder	☺

For ease of calculation, all tables are based on an initial investment of \$100,000. If you have a different amount to invest, pro-rate dollar values.

TABLE 2: CRASH PROOF YOUR CAPITAL: 10% LOSS AT 30% CRASH

(Based on \$100,000 original capital):

Step	Column A Leave this amount in money market fund, \$	Column B Invest this amount in your investment portfolio, \$	Column C Wait until investment portfolio grows to \$:
1	66,667	33,333	38,333
2	55,000	11,667 +int.	57,500
3	37,500	17,500 +int.	86,250
4	11,250	26,250 +int.	129,375
5	0	the remainder	☺

**TABLE 3: CRASH PROOF YOUR CAPITAL:
5% LOSS AT 40% CRASH**

(Based on \$100,000 original capital):

	Column A	Column B	Column C
	Leave this amount in money market fund, \$	Invest this amount in your investment portfolio, \$	Wait until investment portfolio grows to \$:
Step 1	87,500	12,500	14,375
2	84,688	2,813 +int.	19,766
3	80,820	3,867 +int.	27,178
4	75,503	5,317 +int.	37,369
5	68,192	7,311 +int.	51,383
6	58,138	10,053 +int.	70,651
7	44,315	13,823 +int.	97,146
8	25,308	19,077 +int.	133,575
9	0	the remainder	☺

• Go to step 1 of the appropriate table. Invest the amount shown in column "A" in a good money market or T-bill fund. Invest the amount shown in column "B" in equity funds of your choice. For example, if you can tolerate a loss of \$5,000 of your original \$100,000 capital (5%) in a 30% crash, using Table 1, invest \$83,333 in a money market fund and \$16,667 in equity funds.

• Wait until the market value of your equity investment (excluding the money market investment) grows and exceeds the amount shown in column "C". Following the same example, when and if your equity investment exceeds \$19,167 (excluding the money market fund), you are ready to go to step 2 of Table 1.

• Redeem part of your money market fund to bring it down to the amount shown in column "A". Invest the proceeds of this redemption into the equity fund. Following the example, the redemption amount is \$5,833 *plus* the accumulated interest earned in the money market fund. Invest this amount in the equity funds.

• Wait until the market value of your equity investment exceeds the amount in Column "C". Following the example, when and if your equity investment (excluding the money market fund investment) exceeds \$28,750, go to step 3 of Table 1.

• Go through all the steps in a similar fashion until all your money is invested as per your final portfolio plan.

When you reach the last step, notice the smiling face in column "C". It means a market crash of the magnitude for which the portfolio is designed cannot hurt your original capital anymore.

Notice that at each step, you wait until your equity investment grows by 15%. Only then, do you proceed to the next step, removing the specified amount of money from your money market fund and adding to your investment portfolio. That is why I called this system "growth rate averaging".

**TABLE 4: CRASH PROOF YOUR CAPITAL:
10% LOSS AT 40% CRASH**

(Based on \$100,000 original capital):

	Column A	Column B	Column C
	Leave this amount in money market fund, \$	Invest this amount in your investment portfolio, \$	Wait until investment portfolio grows to \$:
Step 1	75,000	25,000	28,750
2	69,375	5,625 +int.	39,531
3	61,641	7,734 +int.	54,355
4	51,006	10,635 +int.	74,739
5	36,383	14,623 +int.	102,766
6	16,277	20,106 +int.	141,303
7	0	the remainder	☺

Benefits of "Growth Rate Averaging"

- Unlike a GIC, money is not locked in. All your money is available to you at anytime.
- You can change your risk tolerance anytime. You may start with a risk tolerance of 5% and later increase it to 7%.
- Since losses are kept under control, it is less likely that you will panic and sell your investments at a loss during a market crash.
- There is no time limit. Just wait until the investment grows, then proceed to the next step.
- If the market is not moving up, your money market investment is earning interest income.
- The faster the markets go up, the faster the next step arrives. You ride along with the market.
- At the start of the plan, the fluctuations of the portfolio value will be at a minimum. With time, the volatility of your portfolio increases. You become accustomed gradually to the concept of "market fluctuations".
- If there is a crash before you are fully invested, you have the cash available to take advantage of lower prices.

The Pitfalls of "Growth Rate Averaging"

- If the markets drop 40% and your plan is designed for a 30% crash, your losses will be greater.
- The portfolio may take a couple of years to several years to fully implement. It takes discipline not to abandon the plan, especially when the markets are roaring upwards. Do not leave the plan unless you are ready to accept the consequences.

Tips

- Establish the proper asset mix of your portfolio *before* you start your growth-rate-averaging plan. If this is an RRSP portfolio, keep an eye on the foreign content at each step.
- Include only the best-performing mutual funds in your portfolio. See my articles about the REEF Line in the November 1996 and December 1996 issues of *Canadian MoneySaver* for lists of good performer.
- Start your plan with equity funds. If your portfolio includes fixed-income funds, invest in them last.
- Initially, because most of your money is in the money market funds, your returns will be modest. Over time, the portfolio return should improve.
- To increase your margin of safety, after reaching the target growth (column "C"), you may want to wait a couple of months before proceeding to the next step.

Example

The inset shows the growth and risk exposure of two imaginary portfolios started in February 1990. Notice the volatility of each portfolio¹. Compare the potential losses. Observe the duration of risk exposure.

In real life, using my spreadsheets, I monitor the portfolio and, if required, rebalance it every three months or so. This allows me to get a continuous and a reasonably flat "loss line", thereby maximizing the returns and/or shortening the completion time of the plan.

Conclusion

The magic of "growth rate averaging" is that it limits your losses. If you are new to equity investments and you have a lump sum of money to invest, growth rate averaging allows you to invest gradually over time, while you learn about the markets. By doing so, you will sleep better.

If you want me to draw up a table for your specific situation, drop me a line. Give me your total investment amount, how much you can risk, and the size of market crash you want projected. Include an SASE and your phone number. It may take a while, but I will reply.

After your capital is fully invested, there is still a probability that the actual market crash may be larger and/or of longer duration than your balanced portfolio was designed for. The best money you make is the money you don't lose. In my next article, I will suggest ways of reducing your risk of ruin.

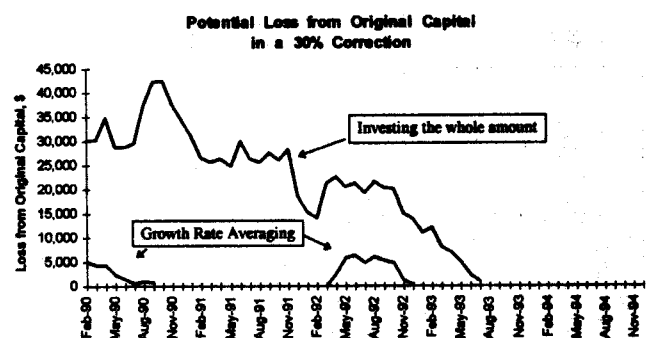
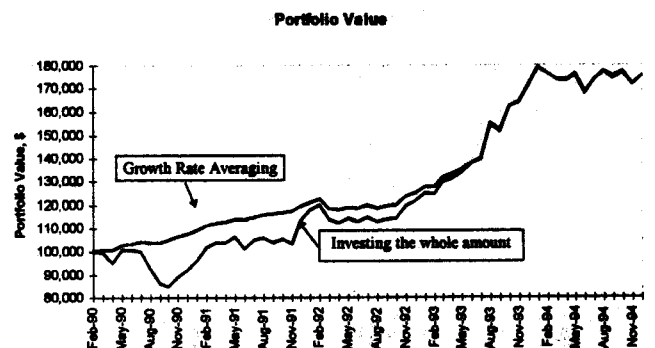
As always, the statements made in this article are of pure mathematical nature and may not be applicable to your individual situation.

Example

In February 1990, an investor had \$100,000 outside his RRSP. He decided that he could risk \$5000 in a 30% crash. He chose a portfolio² of one-third each of Sceptre Equity Growth, Templeton International, and AIC Value.

If he had invested his \$100,000 outright, he stood a chance of losing over \$41,000 from his original capital in September and October 1990, with a crash of 30%. His original capital was exposed to varying amounts of loss in 41 out of 58 months, if a 30% crash occurred.

In the growth-rate-averaging system³, a 30% crash exposed him to a maximum loss of about \$6,200 from his original capital during the month of May 1992. His original capital was exposed to loss in only 16 out of 58 months, if a 30% crash occurred.



¹ Convergence of the two portfolio values at the end can happen but it is not necessarily a usual outcome.

² This is not a recommended portfolio, it is only an example for illustrative purposes.

³ In this example, Sceptre Money Market Fund was used as part of the growth-rate-averaging plan.

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