

## The Magic of Compounding

The Pakistani stock market, over the last 30 years, has given a return of around 20% per year. Bank deposits have yielded on average 8% per year, although most bank depositors have earned a lot less than 8% as their money has been kept in current accounts. In a short span of say one year, the return on the stock market is very volatile. In the last 30-years the best year was 2003 where the stock market return was 103%, and the worst year was 1995 when the stock market experienced a -34% return. However, over longer time periods of say 10 years or more, stock returns tend to regress to the average historical long-term rate of return, which in Pakistan's case, has been around 20% per year.

An investor, who put half of his money in a bank and the other half in the stock market, would have earned an average return of around 14% per year. The length of time that an investment is made, along with the rate of return that it earns, makes a large impact on an investor's wealth accumulation. The difference between a 10% return from a bank or an income fund, a 15% return from a balanced fund and a 20% return from a stock market fund may not seem huge while investing. However, with the power of compounding, it does become very large over a longer period. For example, Rs 100,000 invested in a bank or a saving scheme at 10% per year would grow to Rs 260,000 over a 10 year period. The same Rs 100,000 invested in the stock market at 20% per year, on average, for 10 years would grow to Rs 620,000 – higher by 2.4 times (see

Table 1 below). Longer the period of investment, higher is the difference in investment value due to the magic of compounding. Taking another example, Rs 100,000 invested in a bank or a saving scheme at 10% per year would grow to Rs 1.1 million over a 25 year period. The same Rs 100,000 invested in the stock market at 20% per year for 25 years would grow to Rs 9.5 million – higher by 8.6 times (see Table 1 below).

The magic of compounding results not only from the difference in rate of return on investments, but also from the difference in the investment period. Even for the same investment type, the longer the investment period the more the compounding plays its magic. For example, an amount of Rs 100,000, invested at a rate of 20% per year, increases to Rs 3.8 million over a 20-year period, but grows to Rs 9.5 million over a 25 year period – almost 2.5 times more.

Table 2 shows the benefit of investing even small amounts at regular intervals. If one invests Rs 10,000 per year for 20 years, his or her total amount of investment will be Rs 200,000. However, the value of this investment at a rate of return of say 20% per year would grow to Rs 2.24 million after 20 years – about 11 times the amount invested.

Conclusion: In order to benefit from the power of compounding, two things are important. (i) start saving early and at regular intervals; and (ii) invest in avenues where the expected return is in double digits i.e. 10% or more.

**Table 1:**

Initial investment of Rs. 100,000				
Years invested	5%	10%	15%	20%
1	105,000	110,000	115,000	120,000
5	127,628	161,051	201,136	248,832
10	162,889	259,374	404,556	619,174
15	207,893	417,725	813,706	1,540,702
20	265,330	672,750	1,636,654	3,833,760
25	338,635	1,083,471	3,291,895	9,539,622

**Table 2:**

Annual investment of Rs. 10,000				
Years invested	5%	10%	15%	20%
1	10,500	11,000	11,500	12,000
5	58,019	67,156	77,537	89,299
10	132,068	175,312	233,493	311,504
15	226,575	349,497	547,175	864,421
20	347,193	630,025	1,178,101	2,240,256
25	501,135	1,081,818	2,447,120	5,663,773