(a) label 1 (b) label 2

Figure 1: 2 Figures side by side

A variable annuity (VA) is a life insurance product created by insurance companies to address concerns that many people have about outliving their assets. Essentially, a VA ias deferred annuity with two phases: the accumulation phase and the payout phase. During the accumulation phase, the policyholder makes purchase payments to the insurance company. During the payout phase, policyholder received benefit payments from the insurance company. The policyholder has the option of allocating the money among this set of investment funds. A major feature of a variable annuity is that it includes guarantees or riders.

These guarantees can be divided into two broad categories: death benefits and living benefits. A guaranteed minimum death benefit (GMDB) guarantees a specified lump sum to the beneficiary upon the death of the policyholder regardless of the performance of the investment portfolio.There are several types of living benefits. Popular living benefits include the guaranteed minimum withdrawal benefit (GMWB), the guaranteed minimum income benefit (GMIB), the guaranteed minimum maturity benefit (GMMB), and the guaranteed minimum accumulation benefit (GMAB). A GMWB guarantees that the policyholder can make systematic annual withdrawals of a specified amount from the benefit base over a period of time, even though the investment portfolio might be depleted. A GMIB guarantees that the policyholder can convert the greater of the actual account value or the benefit base to an annuity according to a specified rate. A GMMB guarantees the policyholder a specific amount at the maturity of the contract. A GMAB guarantees that the policyholder can renew he contract during a specified window after a specified waiting period, which is usually 10 years.