

Let us say that Yelberton's preferred choice is B. Imagine that Yelberton's annual rate of return raises from 6% to 9%. In this case, each time he saves \$100,000 in the present, it will be worth \$1,327,000 in 30 years from now (using the formula for compound interest that $\$100,000 (1 + 0.09)^{30} = \$1,327,000$). A change in rate of return alters the slope of the intertemporal budget constraint: a higher rate of return or interest rate will cause the budget line to pivot upward, while a lower rate of return will cause it to pivot downward. If Yelberton were to consume nothing in the present and save all \$1,000,000, with a 9% rate of return, his future consumption would be \$13,270,000, as shown on Figure 2.

As the rate of return rises, Yelberton considers a range of choices on the new intertemporal budget constraint. The dashed vertical and horizontal lines running through the original choice B help to illustrate his range of options. One choice is to reduce present consumption (that is, to save more) and to have considerably higher future consumption at a point like J above and to the left of his original choice B. A second choice would be to keep the level of present consumption and savings the same, and to receive the benefits of the higher rate of return entirely in the form of higher future consumption, which would be choice K.

As a third choice Yelberton could have both more present consumption—that is, less savings—but still have higher future consumption because of the higher interest rate, which would be choice like L, above and to the right of his original choice B. Thus, the higher rate of return might cause Yelberton to save more, or less, or the same amount, depending on his own preferences. A fourth choice would be that Yelberton could react to the higher rate of return by increasing his current consumption and leaving his future consumption unchanged, as at point M directly to the right of his original choice B. The actual choice of what quantity to save and how saving will respond to changes in the rate of return will vary from person to person, according to the choice that will maximize each person's utility.

Figure A

