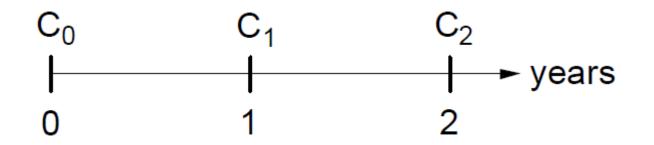
## **Compound interest**

• interest compounded **once** per year



 $C_n = C_0 q^n = C_0 (1 + r_a)^n$ 

## Compound interest during the year

• interest compounded **m times** per year (m > 1)

example: m = 4 (interest compounded quarterly)

$$\begin{array}{cccc} C_{0} & C_{4} & C_{8} \\ \hline & & & \\ 0 & 1 & & \\ 0 & 1 & & 2 \end{array} \text{ years} \\ C_{n} = C_{0} \ q^{n} = C_{0} \ \left(1 + \frac{r_{a}}{4}\right)^{n} \\ \end{array}$$
generally:  $C_{n} = C_{0} \ q^{n} = C_{0} \ \left(1 + \frac{r_{a}}{m}\right)^{n}$