Black-Scholes-Merton Risk Neutral Argument #1 *The Pricing of Options and Corpate Liabilities*
by Black and Scholes (1973)
Theory of Rational Option Pricing
by Merton (1973)
Risk Neutral Portfolio Consider a 'portfolio' with total value Π_t:
Portfolio consists of:

1. 1 call option with price V_t
2. $n \in \mathbb{R}$ units of 'underlying' each with price S_t
3. S_t is underlying asset of V_t (ie V_t is a function of t and S_t)

If portfolio is 'risk-neutral' it's value grows at 'risk-free' rate r:

So **'risk-neutral' assets are deterministic.**