In a discrete-time market with prices \((P_t)_{t \geq 0}\) and dividends \((\delta_t)_{t \geq 1}\) a previsible process \((H_t)_{t \geq 1}\) is self-financing iff

\[
H_{t+1} \cdot P_t = H_t \cdot (P_t + \delta_t)
\]

for all \(t \geq 1\).

This simply means it is a pure investment strategy, there is neither consumption nor external income.

If there are no dividends, the discrete-time self-financing condition becomes

\[
(*)
\]

For a continuous-time market with no-dividends, we take the analog of equation (*) as the definition of a self-financing strategy: a previsible process \(H\) such that

\[
d(H_t \cdot P_t) = H_t \cdot dP_t
\]

with the additional technical condition that

\[
\int_0^t \sum_{i,j} H^i_s H^j_s \, d\langle P^i, P^j \rangle_s < \infty
\]

almost surely for all \(t \geq 0\) so that the stochastic integral \(\int_0^t H_s dP_s\) is defined.