PROJECTION TO THE HORIZON

Risk and Asset Allocation **- Springer –** *`symmys.com`*

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www.symmys.com

Formulas and figures in this presentation refer to the book **Risk and Asset Allocation**, Springer.

The notation, say, (5.24) refers to Formula 24 in Chapter 5 of the book

The notation, say, (T4.12) refers to Formula 12 in the Technical Appendices for Chapter 4, which can be downloaded from www.symmys.com

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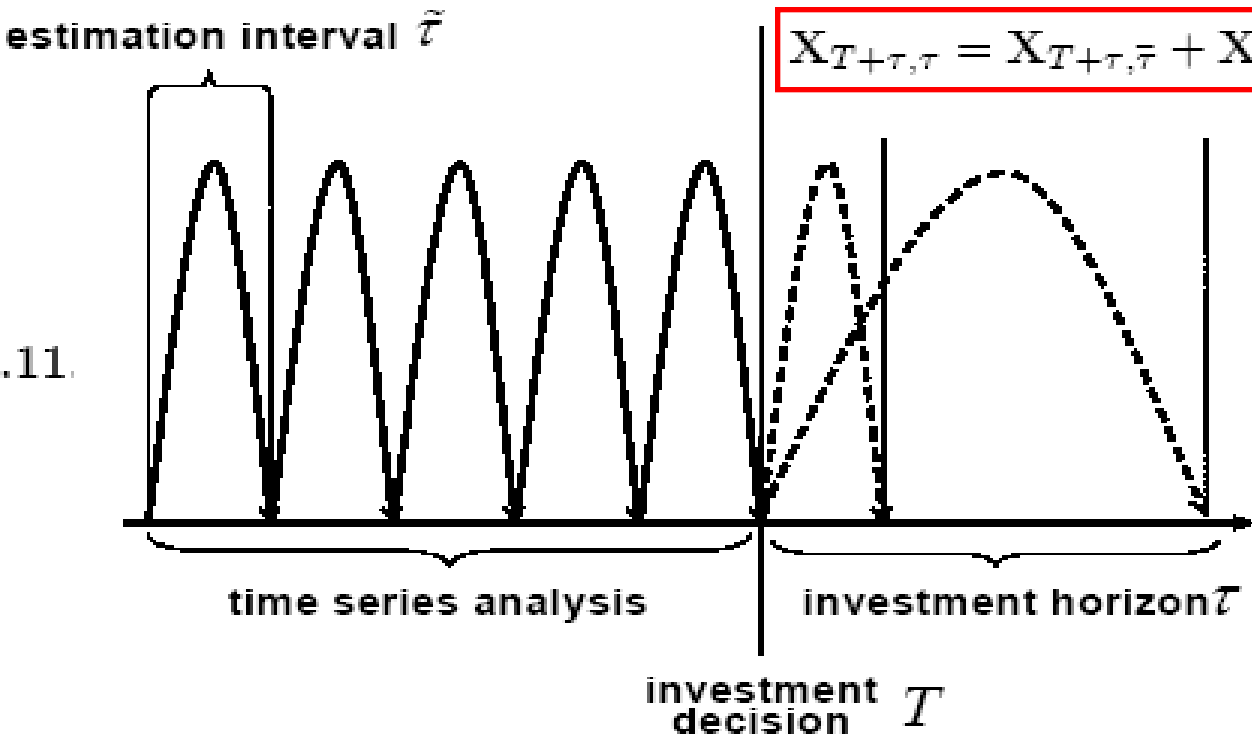
$$\mathrm{X}_{T+\tau,\tau} = \mathrm{X}_{T+\tau,\tilde{\tau}} + \mathrm{X}_{T+\tau-\tilde{\tau},\tilde{\tau}} + \cdots + \mathrm{X}_{T+\tilde{\tau},\tilde{\tau}} \tag{3.60}$$

Fig. 3.11



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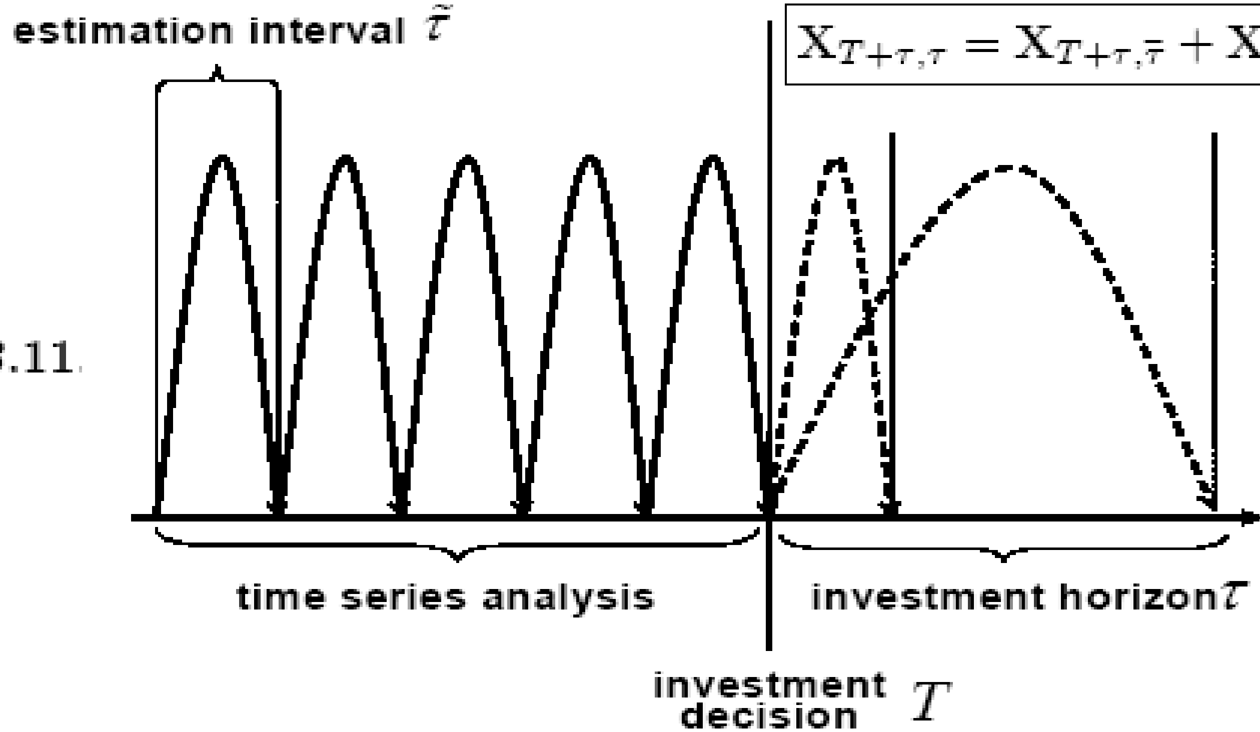

$$\phi_{\mathbf{X}_{T+\tau,\tau}} = \left(\phi_{\mathbf{X}_{t,\tilde{\tau}}}\right)^{\frac{\tau}{\tilde{\tau}}} \qquad (3.64)$$

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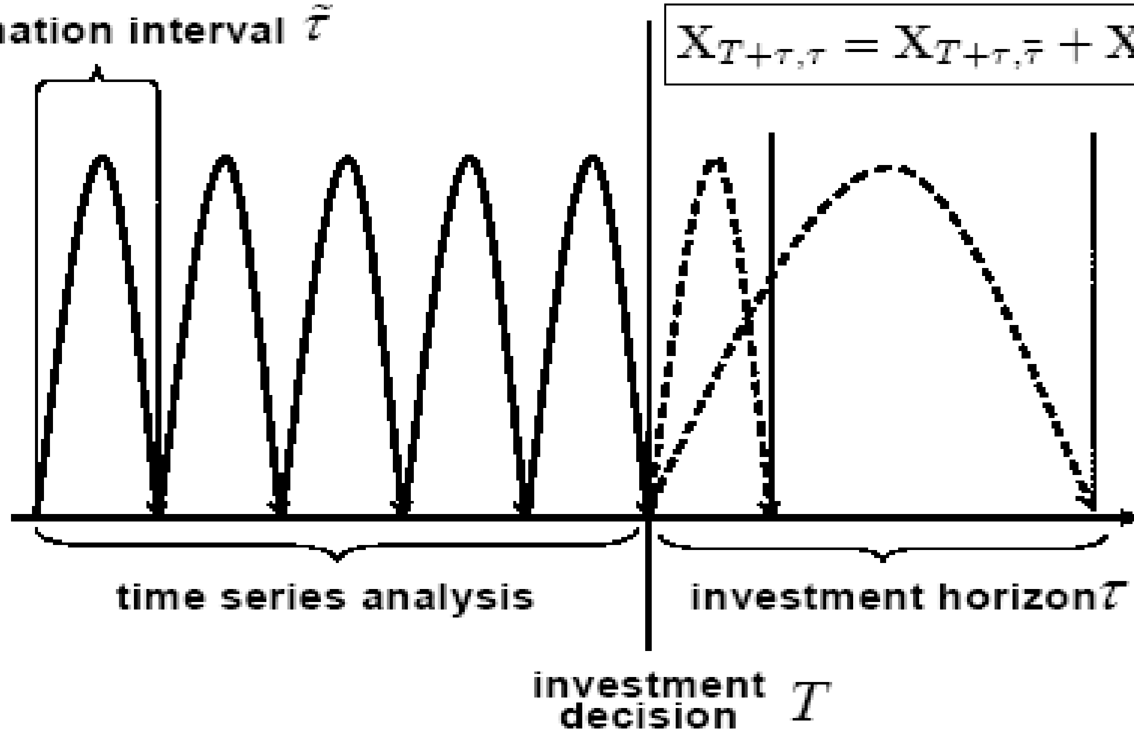

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“square-root” rule

$$\mathrm{Cov}\left\{\mathbf{X}_{T+\tau,\tau}\right\} = \frac{\tau}{\tilde{\tau}} \mathrm{Cov}\left\{\mathbf{X}_{t,\tilde{\tau}}\right\} \quad (3.76)$$

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$f_{\mathbf{X}_{t,\tilde{\tau}}}$

$f_{\mathbf{X}_{T+\tau,\tau}}$

?

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$$f_{\mathbf{X}_{t,\tilde{\tau}}}$$

$$f_{\mathbf{X}_{T+\tau,\tau}}$$

$$\phi_{\mathbf{X}} = \mathcal{F}\left[f_{\mathbf{X}}\right]$$

(2.14)

$$f_{\mathbf{X}} = \mathcal{F}^{-1}\left[\phi_{\mathbf{X}}\right]$$

(3.65)

$$\mathcal{F}\left[v\right](\mathbf{y}) \equiv \int_{\mathbb{R}^N} e^{i\mathbf{y}'\mathbf{x}} v(\mathbf{x})\, d\mathbf{x}. \quad \text{(B.34)}$$

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$$\left[u * v\right]\left(\mathbf{x}\right) \equiv \int_{\mathbb{R}^N} u\left(\mathbf{y}\right) v\left(\mathbf{x}-\mathbf{y}\right) d\mathbf{y}. \quad \text{(B.43)}$$

$$\mathcal{F}\left[\boxed{u * v}\right] = \mathcal{F}[u]\,\mathcal{F}[v] \quad \text{(B.45)}$$

$$f_{\mathbf{X}_{t,\tilde{\tau}}} \qquad\qquad f_{\mathbf{X}_{T+\tau,\tau}}$$

$$\phi_{\mathbf{X}} = \mathcal{F}[f_{\mathbf{X}}] \quad \text{(2.14)}$$

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