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

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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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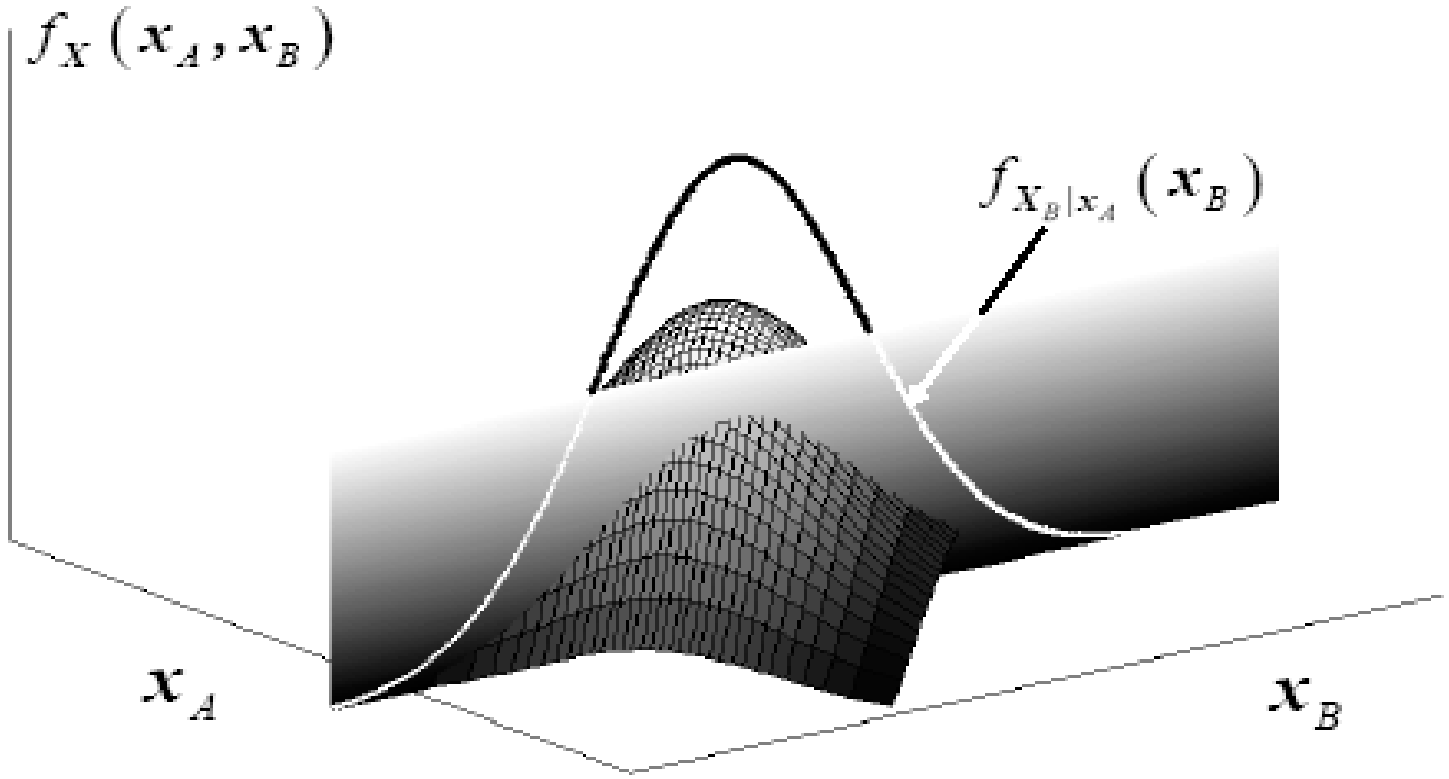

Fig. 2.7. Conditional probability density function

$$f_{\mathbf{X}_B|\mathbf{x}_A}(\mathbf{x}_B) = \frac{f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)}{\int f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)\, d\mathbf{x}_B} = \frac{f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)}{f_{\mathbf{X}_A}(\mathbf{x}_A)} \qquad (2.40)$$

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$$f_{\mathbf{X}_A|\mathbf{x}_B}(\mathbf{x}_A) = \frac{f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)}{\int f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)\, d\mathbf{x}_A} \tag{2.43}$$

$$= \frac{f_{\mathbf{X}_B|\mathbf{x}_A}(\mathbf{x}_B)\, f_{\mathbf{X}_A}(\mathbf{x}_A)}{\int f_{\mathbf{X}_B|\mathbf{x}_A}(\mathbf{x}_B)\, f_{\mathbf{X}_A}(\mathbf{x}_A)\, d\mathbf{x}_A}.$$

$$f_{\mathbf{X}_B|\mathbf{x}_A}(\mathbf{x}_B) = \frac{f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)}{\int f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)\, d\mathbf{x}_B} = \frac{f_{\mathbf{X}}(\mathbf{x}_A, \mathbf{x}_B)}{f_{\mathbf{X}_A}(\mathbf{x}_A)} \tag{2.40}$$