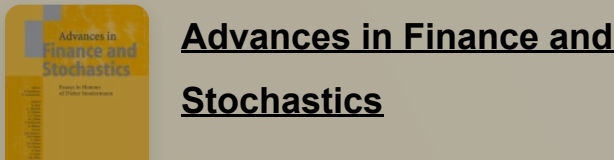


Home > [Advances in Finance and Stochastics](#) > Chapter

# Risk Management for Derivatives in Illiquid Markets: A Simulation Study

| Chapter

| pp 137–159 | [Cite this chapter](#)



## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to [springer.com](#) and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:



- > **Store and/or access information on a device**
- > **Personalised advertising and content, advertising and content measurement, audience research and services development**

Accept all cookies

Reject optional cookies

Manage preferences

Research of the second author was supported by Credit Suisse Group, Swiss Re and UBS AG through RiskLab, Switzerland and by the Swiss Banking Institute, University of Zurich.

 This is a preview of subscription content, [log in via an institution](#)  to check access.

### Access this chapter

Log in via an institution →

[Institutional subscriptions](#) →

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **[privacy policy](#)** for more information on the use of your personal data. Your consent choices apply to [springer.com](#) and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

**Store and/or access information on a device**

**Personalised advertising and content, advertising and content measurement, audience research and services development**

Accept all cookies

Reject optional cookies

Manage preferences

## References

1. Avellaneda, M., A. Levy, and A. Paras (1995): "Pricing and Hedging Derivative Securities in Markets with Uncertain Volatilities," *Applied Mathematical Finance*, 2, 73–88.

[Article](#) [Google Scholar](#)

2. Bakshi, G., C. Cao, and Z. Chen (1997): "Empirical Performance of Alternative Option Pricing Models," *Journal of Finance*, 52, 2003–2049.

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

### Store and/or access information on a device

### Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

7. Frey, R. (1998): “Perfect Option Replication for a Large Trader,” *Finance and Stochastics*, 2, 115–148.

[Article](#) [MathSciNet](#) [MATH](#) [Google Scholar](#)

8. Frey, R. (2000): “Market Illiquidity as a Source of Model Risk in Dynamic Hedging,” in *Model Risk*, ed. by R. Gibson, pp. 125–136. Risk Publications, London.

[Google Scholar](#)

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

### Store and/or access information on a device

### Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

13. Jarrow, R. (1994): "Derivative Securities Markets, Market Manipulation and Option Pricing Theory," *Journal of Financial and Quantitative Analysis*, 29, 241-261.

[Article](#) [Google Scholar](#)

14. Kampovsky, A., and S. Trautmann (2000): "Price impact of Xetra-traders," Preprint, Department of Economics, University of Mainz.

[Google Scholar](#)

15. Kloeden, P., and E. Platen (1992): *Numerical Solution of Stochastic Differential Equations*, Applications of Mathematics. Springer, Berlin.

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

**Store and/or access information on a device**

**Personalised advertising and content, advertising and content measurement, audience research and services development**

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

20. Sircar, R., and G. Papanicolaou (1998): "General Black-Scholes Models Accounting for Increased Market Volatility from Hedging Strategies," *Applied Mathematical Finance*, 5, 45–82.

[Article](#) [MATH](#) [Google Scholar](#)

## Author information

### Authors and Affiliations

**Swiss Banking Institute, University of Zurich, Switzerland**

Rüdiger Frey

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **privacy policy** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

### Store and/or access information on a device

### Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

## About this chapter

## Cite this chapter

Frey, R., Patie, P. (2002). Risk Management for Derivatives in Illiquid Markets: A Simulation Study. In: Sandmann, K., Schönbucher, P.J. (eds) Advances in Finance and Stochastics. Springer, Berlin, Heidelberg. [https://doi.org/10.1007/978-3-662-04790-3\\_8](https://doi.org/10.1007/978-3-662-04790-3_8)

[.RIS↓](#) [.ENW↓](#) [.BIB↓](#)

DOI	Publisher Name	Print ISBN
<a href="https://doi.org/10.1007/978-3-662-04790-3_8">https://doi.org/10.1007/978-3-662-04790-3_8</a>	Springer Berlin Heidelberg	978-3-642-07792-0

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 **partners**, also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our **[privacy policy](#)** for more information on the use of your personal data. Your consent choices apply to springer.com and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

### Store and/or access information on a device

### Personalised advertising and content, advertising and content measurement, audience research and services development

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)

# Navigation

Find a journal

Publish with us

Track your research

## Your privacy, your choice

We use essential cookies to make sure the site can function. We, and our 93 [partners](#), also use optional cookies and similar technologies for advertising, personalisation of content, usage analysis, and social media.

By accepting optional cookies, you consent to allowing us and our partners to store and access personal data on your device, such as browsing behaviour and unique identifiers. Some third parties are outside of the European Economic Area, with varying standards of data protection. See our [privacy policy](#) for more information on the use of your personal data. Your consent choices apply to [springer.com](#) and applicable subdomains.

You can find further information, and change your preferences via 'Manage preferences'. You can also change your preferences or withdraw consent at any time via 'Your privacy choices', found in the footer of every page.

We use cookies and similar technologies for the following purposes:

**Store and/or access information on a device**

**Personalised advertising and content, advertising and content measurement, audience research and services development**

[Accept all cookies](#)

[Reject optional cookies](#)

[Manage preferences](#)