

Search



Home > Handbook of Quantitative Finance and Risk Management > Chapter

Range Volatility Models and Their Applications in Finance

Chapter

pp 1273–1281 | Cite this chapter



Handbook of Quantitative Finance and Risk Management

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 nature.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

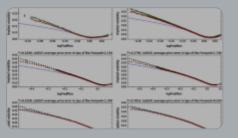
Reject optional cookies

Access this chapter

Log in via an institution \rightarrow

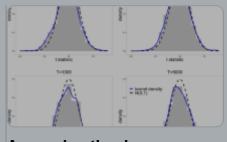
Institutional subscriptions →

Similar content being viewed by others









Approximating long-memory

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 nature.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

Andersen, T., T. Bollerslev, F. Diebold, and H. Ebens. 2001. "The distribution of realized stock return volatility." *Journal of Financial Economics* 61, 43–76.

Article Google Scholar

Andersen, T., T. Bollerslev, F. Diebold and P. Labys. 2003. "Modeling and forecasting realized volatility." *Econometrica* 71, 579–625.

Article Google Scholar

Andersen, T., T. Bollerslev, P. Christoffersen, and F. Diebold. 2006a. "Volatility and correlation forecasting," in *Handbook of economic forecasting*, G. Elliott, C. W. J. Granger, and A. Timmermann (Eds.). North-Holland, Amsterdam, pp. 778–878.

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 nature.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

Bauwens, L., S. Laurent, and J. V. K. Rombouts. 2006. "Multivariate GARCH models: a survey." *Journal of Applied Econometrics* 21, 79–109.

Article Google Scholar

Beckers, S. 1983. "Variances of security price returns based on highest, lowest, and closing prices." *Journal of Business* 56, 97–112.

Article Google Scholar

Bollerslev, T. 1986. "Generalized autoregressive conditional heteroscedasticity." *Journal of Econometrics* 31, 307–327.

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 nature.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

Cappiello L., R. Engle, and K. Sheppard. 2006. "Asymmetric dynamics in the correlations of global equity and bond returns." *Journal of Financial Econometrics* 4. 537–572.

Article Google Scholar

Cheung, Y. 2007. "An empirical model of daily highs and lows." International *Journal of Finance and Economics* 12, 1–20.

Google Scholar

Chou, R. 2005. "Forecasting financial volatilities with extreme values: the

conditional autorogramius rango (CADD) model " Journal of Manay Cradit and

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 nature.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

conditional autoregressive range (CARR) model." *International Research Journal of Finance and Economics* 10, 7–13.

Google Scholar

Chou, R. Y., N. Liu, and C. Wu. 2007. Forecasting time-varying covariance with a range-based dynamic conditional correlation model, Working paper, Academia Sinica.

Google Scholar

Christensen, K. and M. Podolskij. 2007. "Realized range-based estimation of integrated variance." *Journal of Econometrics* 141, 323–349.

Article 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 nature.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

Engle, R. 2002a. "Dynamic conditional correlation: a simple class of multivariate GARCH models." *Journal of Business and Economic Statistics* 20, 339–350.

Article Google Scholar

Engle, R. 2002b. "New frontiers for ARCH models." *Journal of Applied Econometrics* 17, 425–446.

Article Google Scholar

Engle, R., and K. Sheppard. 2001. "Theoretical and empirical properties of dynamic conditional correlation multivariate GARCH." *NBER Working Paper* 8554.

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 nature.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

Hanke, J. and D. Wichern. 2005. *Business forecasting*, 8th ed., Prentice Hall, New York.

Google Scholar

Harvey, A., E. Ruiz, and N. Shephard. 1994. "Multivariate stochastic variance models." *Review of Economic Studies* 61, 247–264.

Article Google Scholar

Kalev, P. S. and H. N. Duong. 2008. "A test of the Samuelson Hypothesis using realized range." *Journal of Futures Markets* 28, 680–696.

Article 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 nature.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

Nelson, D. 1991. "Conditional heteroskedasticity in asset returns: a new approach." *Econometrica* 59, 347–370.

Article Google Scholar

Nison, S. 1991. *Japanese candlestick charting techniques*, New York Institute of Finance, New York.

Google Scholar

Parkinson, M. 1980. "The extreme value method for estimating the variance of the rate of return." *Journal of Business* 53, 61–65.

Article 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 nature.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

Taylor, S. J. 1986. Modelling financial time series, Wiley, Chichester.

Google Scholar

West, K. and D. Cho. 1995. "The predictive ability of several models of exchange rate volatility." *Journal of Econometrics* 69, 367–391.

Article Google Scholar

Wiggins J. 1991. "Empirical tests of the bias and efficiency of the extreme-value variance estimator for common stocks." *Journal of Business* 64, 417–432.

Article 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 nature.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

Department of Finance, Feng Chia University, Taichung, Taiwan, ROC

Nathan Liu

Corresponding author

Correspondence to <u>Ray Yeutien Chou</u>.

Editor information

Editors and Affiliations

Department of Finance and Economics, Rutgers University, 94 Rockafeller Road, Janice H. Levin Bldg., New Brunswick, NJ, 08854-8054, USA

Cheng-Few Lee

State Street Corp., Boston, MA, 94132, USA

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 nature.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

DOI Publisher Name Print ISBN

https://doi.org/10.1007/978-0- Springer, Boston, MA 978-0-387-77116-8

387-77117-5_83

Online ISBN eBook Packages

978-0-387-77117-5 <u>Business and Economics</u>

Economics and Finance (R0)

Publish with us

Policies and ethics [?

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 nature.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

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 nature.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