

SINGLE-STOCK FUTURES

Jack Goodwin had recently read an article on using futures contracts on individual stocks for hedging purposes. He held about 500 shares of Abbott Laboratories in his trading portfolio. While he was concerned about the share price falling in the short run, he was bullish over the long run. Of course, he could sell now and buy later, but that would mean he would have a taxable capital gain, which he wanted to avoid. He thought the single-stock-futures (SSF) contracts offered on the OneChicago Exchange might present the opportunity to hedge the price risk. It was August 16, 2010, and Abbott Labs closed at \$50.34.

OneChicago Exchange

Despite the fact that SSF contracts were widely traded outside the United States, prior to 2000, their listing had not been allowed on U.S. exchanges. There were a number of reasons why SSF contracts were not permitted, but the central issue revolved around a dispute over regulatory authority between the U.S. Commodity Futures Trading Commission (CFTC) and the U.S. Securities and Exchange Commission. The dispute was resolved with the passage of the Commodity Futures Modernization Act of 2000 by the U.S. Congress. Under this law, the two agencies shared jurisdiction.

Established as an electronic exchange in May 2001, the OneChicago Exchange was founded primarily for the trading of SSF contracts. Trading began on November 8, 2002. OneChicago was a joint venture of the Chicago Board Options Exchange, the Chicago Mercantile Exchange, and the Chicago Board of Trade. As of August 2010, it listed SSF contracts on over 1,400 stocks, futures contracts on narrow-based indices—comprising indices of nine or fewer stocks, and futures contracts on exchange-traded funds (ETFs). Trading on the OneChicago Exchange started slowly but quickly accelerated in 2006 and 2007. During the fall of 2008 and all of 2009, the OneChicago Exchange experienced a steep decline in trading

This case was prepared by Robert M. Conroy, J. Harvie Wilkinson Jr. Professor of Business Administration. It was written as a basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation. Copyright © 2011 by the University of Virginia Darden School Foundation, Charlottesville, VA. All rights reserved. To order copies, send an e-mail to sales@dardenbusinesspublishing.com. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the Darden School Foundation.

volume (**Exhibit 1**). The numbers for July and year to date for 2010 show a significant rebound. Based on the figures¹ for calendar year 2008, about 85% of contracts traded were SSF contracts.

Single-Stock Futures

Single-stock futures were futures contracts whose underlying asset was one stock. (See **Exhibit 2** for a description of the contract specifications for SSFs.) The typical SSF contract was for 100 shares in the underlying stock. Unlike some other futures contracts, SSFs were settled with physical delivery of the underlying shares. There were margin requirements for both the buy side and the sell side of SSFs, which was generally 20% of the underlying asset's value. To enter into a futures contract on 100 shares of "XYZ" stock trading at \$45 per share, the initial 20% margin would be \$900. A minimum of 20% of the current value would have to be maintained in a participant's account on a daily basis. This minimum might differ for other types of positions.

While trading on the OneChicago Exchange had increased dramatically over its life, SSFs had not really gained significant popularity among securities and derivatives traders in the United States. In 2008, among global futures-and-options exchanges, OneChicago ranked 41st. As a point of comparison, the Johannesburg Stock Exchange in South Africa, which actively trades SSFs, had a 2008 volume of over 500 million contracts contrasted with 4 million on the OneChicago Exchange (see **Exhibit 3** for details).

Jack Goodwin

Exhibit 4 shows the futures price quotes for Abbott Labs. Goodwin wondered how attractive these rates were compared with the equilibrium futures price. He collected information on Abbott's dividends and current risk-free rates of return (**Exhibit 4**, **Exhibit 5**, and **Exhibit 6**).

¹ "OneChicago Reports December Volume"; "Month End Volume and Open Interest—Summary," OneChicago press release and report, January 6, 2009, <http://www.onechicago.com/?p=1424> (accessed February 17, 2011).

Exhibit 1

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OneChicago Trading Volume

Year	Number of Contracts (in thousands)		
	Month of July	Year to Date	Total Calendar Year
2010	599.6	3,191.3	
2009	301.6	1,309.2	2,983.1
2008	420.4	2,878.4	4,012.3
2007	301.6	2,591.7	8,106.0
2006	810.2	5,904.9	7,923.5
2005	860.1	2,753.6	5,528.0

Data source: Trading volume data are from August exchange press releases PR10-36, PR09-30, PR08-33, PR07-10, PR06-11, and PR05-18.

Exhibit 2

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Contract Specifications for Single-Stock Futures on the OneChicago Exchange

Contract Size	100 shares of underlying security or 1,000 shares of underlying security
Minimum Price Fluctuation (Tick Size)	$\$0.01 \times 100 \text{ shares} = \1.00 or $\$0.01 \times 1,000 \text{ shares} = \10.00
Regular Trading Hours for Single-Stock Futures	8:30 a.m. to 3:00 p.m. central standard time
Regular Trading Hours for Futures on ETFs	8:30 a.m. to 3:15 p.m. central standard time
Position Limits for 100 Share Contracts	Apply only during the last five trading days prior to expiration: 13,500 or 22,500 net contracts, or position accountability (PA), as required by CFTC regulations.
Position Limits for 1,000 Share Contracts	Apply only during the last five trading days prior to expiration: 1,350 or 2,250 net contracts, or PA, as required by CFTC regulations.
Daily Price Limits	None
Reportable Position Level	200 contracts
Contract Months	Any calendar month, up to two calendar years
Expiration Date/Last Trading Day	Third Friday of the contract month or, if such Friday is not a business day, the immediately preceding business day
Settlement/Delivery	Physical delivery of underlying security on third business day following the Expiration Day
Depository for Underlying Security	The Depository Trust & Clearing Corporation (DTCC)

Source: OneChicago, "SSF/ETF Contract Specifications," last updated on October 20, 2009, http://www.onechicago.com/?page_id=751 (accessed February 17, 2011).

Exhibit 3

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Top Derivatives Exchanges Worldwide

Top Derivatives Exchanges Worldwide Ranked by Number of Futures and Options Traded and/or Cleared in 2008* (in millions)				
Rank	Exchange	2008	2007	% Change
1	CME Group (includes CBOT and Nymex) *	3,278	3,158	3.80%
2	Eurex (includes ISE) *	3,173	2,704	17.30%
3	Korea Exchange	2,865	2,777	3.20%
4	NYSE Euronext (includes all EU and US markets) *	1,676	1,525	9.90%
5	Chicago Board Options Exchange (includes CFE) *	1,195	946	26.30%
6	BM&F Bovespa *	742	794	-6.60%
7	Nasdaq OMX Group (includes all EU and US markets) *	722	551	31.00%
8	National Stock Exchange of India	590	380	55.40%
9	JSE South Africa	514	330	55.80%
10	Dalian Commodity Exchange	313	186	68.70%
40	Malaysia Derivatives Exchange	6	6	-1.30%
41	OneChicago	4	8	-50.50%
42	Kansas City Board of Trade	4	5	-15.10%
43	Climate Exchange (includes ECX and CCFE) *	3	1	149.30%
44	Central Japan Commodity Exchange	3	7	-50.00%
45	Thailand Futures Exchange	2	1	74.60%
46	New Zealand Futures Exchange	1	2	-11.60%
47	Minneapolis Grain Exchange	1	2	-22.90%

Data source: Galen Burghardt and Will Acworth, "Annual Volume Survey," *Futures Industry*, 2008, http://www.futuresindustry.org/downloads/March_Volume.pdf (accessed November 30, 2011).

Exhibit 4

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OneChicago Futures Prices, Abbott Laboratories

Trade Date	Symbol	Expiration Month-Year	Product Type	Shares per Contract	Settle	Change	Open Interest
8/16/2010	ABT1C	Aug-10	SSF	100	50.34	0.28	11,030
8/16/2010	ABT1C	Sep-10	SSF	100	50.35	0.28	10
8/16/2010	ABT1C	Dec-10	SSF	100	49.94	0.28	546
8/16/2010	ABT1C	Mar-11	SSF	100	49.54	0.28	0

Data source: OneChicago Exchange market data quotes on August 16, 2010.

Exhibit 5

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Dividend Payments, Abbott Laboratories

Type	Dividend Rate	Expiration Date	Payable Date
Quarterly	\$0.44	10/13/2010	11/15/2010
Quarterly	\$0.44	7/13/2010	8/15/2010
Quarterly	\$0.44	4/13/2010	5/15/2010
Quarterly	\$0.40	1/13/2010	2/15/2010
Quarterly	\$0.40	10/13/2009	11/15/2009
Quarterly	\$0.40	7/13/2009	8/15/2009
Quarterly	\$0.40	4/13/2009	5/15/2009
Quarterly	\$0.36	1/13/2009	2/15/2009
Quarterly	\$0.36	10/11/2008	11/15/2008
Quarterly	\$0.36	7/11/2008	8/15/2008
Quarterly	\$0.36	4/11/2008	5/15/2008
Quarterly	\$0.33	1/11/2008	2/15/2008
Quarterly	\$0.33	10/11/2007	11/15/2007
Quarterly	\$0.33	7/11/2007	8/15/2007
Quarterly	\$0.33	4/11/2007	5/15/2007
Quarterly	\$0.30	1/10/2007	2/15/2007
Quarterly	\$0.30	10/11/2006	11/15/2006
Quarterly	\$0.30	7/12/2006	8/15/2006
Quarterly	\$0.30	4/11/2006	5/15/2006
Quarterly	\$0.28	1/11/2006	2/15/2006

Data source: Datastream.

Exhibit 6
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Interest Rates

U.S. Treasury Constant Maturities	as of 8/16/2010
1-month	0.15%
3-month	0.16%
6-month	0.19%
1-year	0.25%
2-year	0.51%

Data source: Market data, *Wall Street Journal*, online edition, August 16, 2010.