Trading Guide

Single Stock Futures

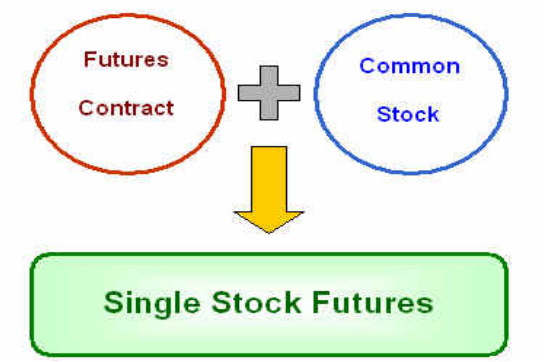
Content

Bualuang Securities Public Company Limited produced this document in order to provide investors with additional knowledge about and understanding of Single Stock Futures. The information may be useful for customers opening a futures trading account, but should not be construed as an investment recommendation.

Investment involves risk. Investors should make investment decisions with care.

1 Introduction to Single Stock Futures

Single Stock Futures consist of two important components—a futures contract and a common stock. The combination of these two components creates the futures contract with the common stock as the underlying asset.



2 Characteristics and Specifications of Single Stock Futures

TFEX has defined the characteristics and specifications for Single Stock Futures as follow:

Heading	Contract specification
Underlying Assets	Listed securities in the SET which meet TFEX listing criteria. List of underlying will be announced by TFEX.
Contract Size	1,000 shares per contract
Contract Months	March, June, September, December up to 4 nearest quarters
Minimum Price Fluctuations (Tick Size)	THB 0.10
Price Limit	± 30% of the previous day settlement price
Trading Hours	Pre-open: 9:15 - 9:45 hrs. Morning session: 9:45 - 12:30 hrs. Pre-open: 14:00 - 14:30 hrs. Afternoon session: 14:30 - 16:55 hrs.
Speculative Position limit	Net 5,000 contracts on one side of the market in any contract month or all contract months combined. (until further notice)
Final Trading Day	The business day immediately preceding the last business day of the contract month. Time at which trading ceases on Final Trading Day is 16.30 hrs.
Final Settlement Price	The average of the underlying share price during last 15 minutes plus the closing price on the last trading day, rounded to the nearest two decimal points.
Settlement Method	Cash Settlement

2.1 Underlying Asset

The listed companies selected by TFEX as the underlying stocks for Single Stock Futures are:

Stock Symbols	Company Name	First trading day
ADVANC	Advance Info Service Public Company Limited	24 Nov. 2008
BANPU	Banpu Public Company Limited	22 Jun. 2009
BAY	Bank of Ayudhya Public Company Limited	22 Jun. 2009
BBL	Bangkok Bank Public Company Limited	22 Jun.2009
ITD	Italian-Thai Development Public Company Limited	22 Jun.2009
KBANK	Kasikorn Bank Public Company Limited	22 Jun.2009
KTB	Krungthai Bank Public Company Limited	22 Jun.2009
LH	Land and House Public Company Limited	22 Jun.2009
PTT	PTT Public Company Limited	24 Nov. 2008
PTTEP	PTT Exploration and Production Public Company Limited	24 Nov. 2008
QH	Quality House Public Company Limited	22 Jun. 2009
SCB	The Siam Commercial Bank Public Company	22 Jun. 2009
SCC	The Siam Cement Public Company Limited	22 Jun. 2009
TTA	Thoresen Thai Agencies Public Company Limited	22 Jun. 2009

2.2 Contract Size

One contract of Single Stock Futures initially contains 1,000 common shares. However, the contract size can be adjusted when a corporate action occurs.

2.3 Contract Months

TFEX sets the contract months (delivery months) of the Single Stock Futures as the last month of each quarter—March, June, September and December. For example, if today is 24 Nov 2008, the outstanding contracts for the single stock futures being traded will be for the following contract months only:

1 December 2008
2 March 2009
3 June 2009
4 September 2009

However, on the last trading day of the nearest contract, the next further contract will be opened for trading. Assuming that today is the last trading day for the contract expiring in Dec 2008, a new contract expiring in Dec 2009 will automatically be opened for trading.

2.4 Tick Size

The tick size for the Single Stock Futures equals Bt0.1. That means the price difference between each order cannot be less than Bt0.1.

- Examples of the valid price ranges are Bt50, 50.1 ... 100.1 and 100.2.
- Examples of the invalid price ranges are Bt50.03, 25.25, 79.08 and 100.22.

2.5 Ceiling/Floor

The TFEX has set daily ceilings and floors for Single Stock futures. The ceilings are 30% above the previous day's settlement prices; the floors are 30% below the previous day's settlement prices. For example, if the previous day's settlement price was Bt50, the price at which the contract can be traded may not exceed Bt65 and may not be lower than Bt35.

For a Combination order, the ceiling and floor are set using the last previous day's settlement prices of the far month minus the near month (Far-Near). The ceiling is equal to the spread of the previous day's settlement price of the far-near month +10.0, while the floor is equal that spread –10.0.

2.6 Trading Hours

The trading day is divided into four sessions

Session	Details	Periods
1	Pre-open	9:15 – 9:45
2	Morning session	9:45 – 12:30
3	Pre-open	14:00 – 14:30
4	Afternoon session	14:30 – 16:55

2.7 Last Trading Day

The last trading day of each contract is the day prior to the last exchange business day in the contract month. Examples are as follow:

Contract's Expirations	Last Trading Days
December 2008	29 December 2008
March 2009	30 March 2009
June 2009	29 June 2009
September 2009	29 September 2009
December 2009	29 December 2009

On the last trading day, the contract can be traded only until 16.30 hrs.

2.8 Final Settlement Price

The final settlement price comes from the average price of the underlying stock on the last trading day of the contract. It is calculated from the stock price on a minute-by-minute basis during the last 15 minutes before the trading ends, starting from 16:15 through to 16:30, and the closing price of the stock on that day. Two decimal points will be used for rounding the number of the average.

2.9 Cash Settlement

Similarly to Index Futures, there is no physical delivery of stocks at the end of the contract. Only cash settlement will be made. The gains and losses from the contract's position will result in a cash transfer to the customer's account. When a contract is settled in cash, its position will be declared closed.

3 Contract Code

3.1 Single Order

The contract code for a single order of Single Stock Futures comprises four parts, as shown below.

Part 1	Part 2	Part 3	Part 4
ABCDEF	Z	09	X

Part 1: Underlying Asset
The stock symbol as traded in the SET is used. The symbol contains 2-6 characters and/or numbers.

Part 2: Contract Month
The symbol of each expiry month is represented by a letter, see below.

Expiry months	Symbol
March	H
June	M
September	U
December	Z

Part 3: Expiry Year
The last two digits of the respective expiry year are used—for example, 08 for the contract expiry year 2008 and 09 for a contract due to expire in 2009.

Part 4: Contract Adjustment
In the case that there is some sort of corporate action, a contract adjustment can occur which changes the underlying asset, the contract size, the contract price, or the number of contracts outstanding, etc. The TFEX has set some additional symbols as indicators for adjustments, as follow:

- X indicates the first contract adjustment
- Y indicates the second contract adjustment
- Z indicates the third contract adjustment

The contract codes for Single Stock Futures using single orders for all contract months can be found in Attachment 1.

3.2 Combination Order

The contract code for a combination order of Single Stock Futures comprises seven parts, as follow:

Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7

ABCDEF	U	09	X	Z	09	X

Part 1: Underlying Asset
The stock symbol as traded in SET is used. The symbol contains 2-6 characters and/or numbers.

Part 2 and part 5: Contract Months
Each expiry month is represented by a letter, see below.

Expiry month	Symbol
March	H
June	M
September	U
December	Z

Part 3: Expiry Year
The last two digits of the respective expiry years are used—for example, 08 for contract expiry year 2008, and 09 for a contract due to expire in 2009.

Part 4: Contract Adjustment
In the case that there is some sort of corporate action, a contract adjustment can occur which changes the underlying asset, the contract size, the contract price, or the number of contracts outstanding, etc. The TFEX has set some additional symbols as indicators for adjustments, as follow:

1. X indicates the first contract adjustment
2. Y indicates the second contract adjustment
3. Z indicates the third contract adjustment

Example of trading using Combination Order

1. An investor sends an order to buy PTTU09Z09 for Bt1 means the investor wants to buy PTTZ09 and sell PTTU09 simultaneously. The price of PTTZ09 minus the price of PTTU09 must not exceed Bt1.
2. An investor sends an order to sell PTTU09XZ09X for Bt2 means the investor wants to sell PTTZ09X and buy PTTU09X simultaneously. The price of PTTZ09X minus the price of PTTU09X must not be lower than Bt2.

The contract codes for Single Stock Futures using combination orders for all contract months can be found in Attachment 1.

4 Circuit Breaker

Single Stock Futures cannot be traded at prices of more than 30% above (Ceiling) or 30% below (Floor) the previous day's settlement prices. As its underlying assets are stocks traded on the SET, if the SET closes due to the kicking in of a Circuit Breaker, the TFEX also closes for trading.

Circuit Breaker conditions specified by SET are as follow:

The First Circuit Breaker kicks in when the SET Index decreases by 10% from its previous day's close. The SET stops trading for 30 minutes.
The Second Circuit Breaker is engaged when the SET Index drops 20% from its previous day's close. Market trading is halted for one hour.

After the second Circuit Breaker has elapsed, the SET reopens for trading until normal closing time without any further stops. In the case that the remaining trading time of the session is less than 30 minutes or one hour when the Circuit Breaker engages, the SET will simply stop trading for the remaining normally allotted trading period.

Note also that whenever the underlying stock of the Single Stock Futures is halted or suspended in the SET, the corresponding Single Stock Futures will also be halted or suspended in the TFEX.

5 Commission Fee

The commission is the combination between contract-value based commission and fixed commission per contract, VAT exclusive, for offline and Internet trading as follows:

Contract Price	Commission Fee	Effective Period
Less than or equal to Bt10	0.10% of contract value + Bt0.35 per contract	1 Aug. 2009 - 31 Dec. 2009
More than Bt10	0.10% of contract value + Bt3.5 per contract	
Less than or equal to Bt10	0.10% of contract value + Bt0.50 per contract	1 Jan. 2010 - 31 Dec. 2010
More than Bt10	0.10% of contract value + Bt5 per contract	
Less than or equal to Bt10	0.10% of contract value + Bt1 per contract	From 1 Jan. 2011 onwards
More than Bt10	0.10% of contract value + Bt10 per contract	

Example

- An investor buys one contract of PTTZ09 (1 contract size = 1,000 shares) at Bt180, so the commission fee (VAT exclusive) can be calculated by 180 x 1,000 x 0.10% + 3.5 = 180 + 3.5 = Bt183.5

6 Contract Holding till Expiration

A futures contract of Single Stock Futures that is held till expiration will be marked to market at the end of the last trading day of that contract month. The investor will receive/pay the difference between the final cost and the final settlement price while his/her position will be automatically closed.

7 Speculative Position Limit

The maximum number of contracts that a speculator may hold in single stock futures is not more than 5,000 contracts on one side of the market in any contract month or all contract months combined. However, some investors may receive an exception to hold positions that exceed the speculative limit.

The initial speculative position limit of 5,000 contracts is effective from 24 Nov 2008 to 31 March 2009.

8 Reportable Limit

As specified by the SEC and TFEX, all brokers must report name lists of clients that hold at least 500 contracts in any one Single Stock Futures for one contract month or all contract months combined. However, the investors can still increase their holding positions, so long as they do not exceed their authorized credit limits and do not exceed the speculative position limit set by the TFEX.

9 Results of Corporate Actions

9.1 What is a Corporate Action?

A corporate action is an event created by a SET-listed company that may impact on that company's stock price, such as a share split, a reverse stock split, a cash dividend, stock dividend (bonus issue), merger, name change, spin-off, warrant issue, etc.

A corporate action normally brings about a change in the par value of a stock.

Examples of corporate actions that do and do not affect and affect the par value of a stock are as follow:

Not Affect Par Value	Affect Par Value
– Name Change – Cash Dividend – Extraordinary Cash Dividend	– Stock Split – Reverse Stock Split – Stock Dividend – Rights Issue

9.2 Contract Adjustment Principle

As the underlying assets of Single Stock Futures are specific common stocks, when a corporate action occurs to any of those stocks, the TFEX and the TCH will adjust the affected contracts in order to alleviate the impact on investors.

There are various kinds of corporate actions. However, some do not require a contract adjustment, such as an ordinary cash dividend, etc.

TFEX can make a contract adjustment by amending one or several items at the same time such as:

- Contract code
- Contract price (new cost on Ex-Date)
- Contract size
- Open position
- Cash settlement (receivable/payable)

9.3 Contract Adjustment Methodologies

Adjustment can be classified into two types:

Standard Adjustments

Specified by TFEX for common cases, as follow:

- Stock split or reversed stock split

- Bonus issue or stock dividend
- Extraordinary cash dividend
- Rights offering or rights issue

Non-standard Adjustments
in other cases of corporate actions besides Standard Adjustments (see above), the following conditions will be considered by TFEX:

- Whether or not a contract adjustment is necessary
- If the adjustment is necessary, what method should be used

In the case of corporate actions with characteristics and fundamentals that differ from common cases, the TFEX (with the approval of the managing director of TFEX) may alter the adjustment method accordingly.

9.4 Standard Contract Adjustment

The adjustment for the above four common cases are explained below:

Contract code

When a corporate action causes an impact to some contract specification—such as underlying code, contract size, contract price, the number of contract outstanding, etc—the TFEX will add one additional letter following the end of the contract code in order to notify investors about the adjustment:

- X represents the first adjustment
- Y represents the second adjustment
- Z represents the third adjustment

Contract price (new cost on Ex-Date)

- The new futures contract price = The original futures contract price x F

Contract size

- New contract size = original contract size / F

Note: F is the adjustment factor calculated according to the type of corporate action, as follows:

1. Stock split or reversed stock split

When ABC company changes its stock par value, causing a change in the number of share, outstanding from X shares to Y shares:

- If Y > X, it is called stock split
- If Y < X, it is called reverse stock split

$$\text{Adjustment Factor (F)} = \frac{X}{Y}$$

2. Bonus issue or stock dividend

When ABC company pays a stock dividend to original shareholders at a rate of B original shares per A new shares

$$\text{Adjustment Factor (F)} = \frac{B}{A + B}$$

3. Extraordinary cash dividend

When ABC company pays an extraordinary cash dividend of BtD per share (S = closing price of underlying stock on the day prior to the Ex-Date)

$$\text{Adjustment Factor (F)} = \frac{S - D}{S}$$

4. Rights offering or rights issue

When ABC company offers original shareholders the opportunity to purchase new common stock at a rate of B original shares per A new shares at BtS per share (S = price...)

$$\text{Adjustment Factor (F)} = \frac{B + (A \times (C/S))}{A + B}$$

9.5 Examples of Standard Adjustment Calculations

9.5.1 Case of a Stock Split

PTTEP company splits one original share to five new shares (changes its par value from Bt5 per share to Bt1 per share)

Information of the contracts one day prior to the Ex-date

Contract Codes	Contract prices	Contract size	Open positions
PTTEPH09	86	1,000	2,500
PTTEPM09	87	1,000	1,500
PTTEPU09	88	1,000	120
PTTEPZ09	89	1,000	30

The adjustment factor (F) can be calculated, as follows:

$$F = \frac{X}{Y} = \frac{1}{5} = 0.2$$

Information of the contracts on the ex-date will be:

Contract Codes	Contract prices	Contract size	Open positions
PTTEPH09X	86 x 0.2 = 17.2	1,000 / 0.2 = 5,000	2,500
PTTEPM09X	87 x 0.2 = 17.4	1,000 / 0.2 = 5,000	1,500
PTTEPU09X	88 x 0.2 = 17.6	1,000 / 0.2 = 5,000	120
PTTEPZ09X	89 x 0.2 = 17.8	1,000 / 0.2 = 5,000	30

9.5.2 Case of Bonus Issue or Stock Dividend

PTT company announces that it will a pay stock dividend to shareholders at a rate of four original shares per one new share.

Information of the contracts one day prior to the ex-date

Contract Codes	Contract prices	Contract size	Open positions
PTTH09	155	1,000	2,000
PTTM09	156	1,000	1,000

PTTU09	157	1,000	100
PTTZ09	158	1,000	20

The Adjustment factor (F) can be calculated, as follows:

$$F = \frac{B}{A+B} = \frac{4}{1+4} = 0.8$$

Information of the contracts on the ex-date will be:

Contract Codes	Contract prices	Contract size	Open positions
PTTH09X	155 x 0.8 = 124	1,000 / 0.8 = 1,250	2,000
PTTM09X	156 x 0.8 = 124.8	1,000 / 0.8 = 1,250	1,000
PTTU09X	157 x 0.8 = 125.6	1,000 / 0.8 = 1,250	100
PTTZ09X	158 x 0.8 = 126.4	1,000 / 0.8 = 1,250	20

9.5.3 Case of Extraordinary Cash Dividend

ABC company announces that it will pay shareholders an extraordinary cash dividend of Bt5. The closing price of ABC on the day prior to the ex-date is Bt50.

Information of the contracts a day prior to the ex-date

Contract Codes	Contract prices	Contract size	Open positions
ABCH09	51	1,000	3,000
ABCM09	51.5	1,000	1,200
ABCU09	52	1,000	400
ABCZ09	52.5	1,000	50

The Adjustment factor (F) can be calculated, as follows:

$$F = \frac{S - D}{D} = \frac{50 - 5}{50} = 0.9$$

Information of the contracts on the ex-date will be:

Contract Codes	Contract Prices	Contract size	Open positions
ABCH09X	51 x 0.9 = 45.9	1,000 / 0.9 = 1,111	3,000
ABCM09X	51.5 x 0.9 = 46.35	1,000 / 0.9 = 1,111	1,200
ABCU09X	52 x 0.9 = 46.8	1,000 / 0.9 = 1,111	400
ABCZ09X	52.5 x 0.9 = 47.25	1,000 / 0.9 = 1,111	50

9.5.4 Case of Rights Offering or Right Issue

DEF Company announces a rights offering to shareholders to purchase new common shares at a rate of two original shares per one new share at a price of Bt35 per share. The closing price of DEF a day prior to the Ex-Date is Bt50.

Information of the contracts a day prior to the ex-date:

Contract Codes	Contract prices	Contract size	Open positions
DEFH09	50	1,000	3,500

DEFM09	50.5	1,000	1,400
DEFU09	51	1,000	600
DEFZ09	52	1,000	70

The Adjustment factor (F) can be calculated as follows:

$$F = \frac{B + (A \times (C/S))}{A + B} = \frac{2 + (1 \times (35/50))}{1 + 2} = 0.9$$

Information of the contracts on the ex-date will be:

Contract Codes	Contract prices	Contract size	Open positions
DEFH09X	50 x 0.9 = 45	1,000 / 0.9 = 1,111	3,500
DEFM09X	50.5 x 0.9 = 45.45	1,000 / 0.9 = 1,111	1,400
DEFU09X	51 x 0.9 = 45.9	1,000 / 0.9 = 1,111	600
DEFZ09X	52 x 0.9 = 46.8	1,000 / 0.9 = 1,111	70

10 Trading Strategies

10.1 Directional Trading Strategy

Investors can use Single Stock Futures to profit in both bull and bear markets. This is due to the fact that Single Stock Futures don't require a physical transfer of real assets, only cash settlement—the process of receiving or paying the difference between the contract price and the final settlement price. As a result, investors can make the following transactions conveniently and efficiently:

1. "Buy and sell " in order to speculate on a market uptrend.
2. "short sell and buy back" in order to speculate on a market downtrend.

Trading between Single Stock Futures and common stocks can be compared, as follows:

	Common stock trading	Single Stock Futures Trading
Buy and sell	Can be done immediately	Can be done immediately
Short sell and buy back	Need to borrow the stock first to short Sell	Can be done immediately
Commission fee	Higher	Lower
Minimum lot	100 shares	1 contract (1,000 shares / 1 contract)
Normal Cash Dividend	1. Buyers receive money 2. Stock borrowers pay dividends to the lenders	1. Buyers receive no dividend 2. Sellers pay no dividend
Other Corporate Action	As per normal practice	Contract adjustment might be required
Settlement	Physical delivery	Cash settlement
Profit/Loss	1. Buyers realize gain/loss after selling 2. Sellers realize gain/loss after buying back	1. Buyers realize gain/loss at the end of the day 2. Sellers realize gain/loss at the end of the day

Margin Settlement	1. Not applicable for Cash ATS Account 2. Not applicable for Cash Balance Account 3. Applicable for Credit Balance Account	SPAN Margin calculation will be applied. Investors need to settle an initial margin before trading.
Initial Margin	50% - 100%	Approximately 10% - 20%

10.2 Spread Trading Strategies

Besides directional trading, investors can also apply spread trading strategies that involve trading two futures contracts simultaneously. Three common spread trading strategies are summarized below:

10.2.1 Calendar Spread

Strategy components

The calendar spread, also called an inter-month spread, is a strategy that comprises:

1. Long position in one futures contract.
2. Short position in one futures contract (the same underlying asset, but a different contract month).

Examples

1. Long PTTU08 and short PTTZ08 (buy near, sell far)
2. Short ADVANCM09 and long ADVANCU09 (buy far, sell near)

Objectives of the Strategy

1. The investor is holding contracts with low liquidity and needs to close out the position.

   Example On 1st February 2009, Mr. A has a long position in contract PTTZ09, but the price of PTT has dropped dramatically by that time, so Mr. A needs to close his position. However, the liquidity of PTTZ09 which is the furthest month is very low.

   Mr. A can apply the strategy by taking a short position either on PTTH09 or PTTM09 for a similar amount to hedge his position (stop loss), then close out the two contracts later when there is enough liquidity.

2. An investor has a long position in a contract and would like to close his position. However, the contracts (of the same underlying stock) in other series are trading at much better prices.

   Example On 1st March 2009, Mr A has a long position in ADVANCM09 and needs to close his position as the price of ADVANCM09 now has gone up significantly. However, the prices of other series, such as ADVANCU09, are much higher.

   Therefore, Mr A should short ADVANCU09 for the same amount in order to hedge his position (lock the profit), then close the two contracts later when the price of ADVANCM09 increases to the same level as ADVANCU09.

3. Price Speculation

Example The price difference (PTTEPZ09 – PTTEPU09) currently equals Bt2, but the

investor expects the difference between the two contracts (PTTEPZ09 – PTTEPU09) to be smaller in the future.

So the investor can short PTTEPU09Z09 at Bt2 and close his position in the two contracts when the price difference (PTTEPZ09 – PTTEPU09) declines by taking a long position in PTTEPU09Z09.

Tips

1. The transaction costs involved in this strategy are double that of a directional trading strategy.
2. The combination order can be used with a calendar spread trading strategy.

10.2.2 Inter-Commodity Spread

Strategy components

The inter-commodity spread comprises:

1. Long position in X futures contract
2. Short position in Y futures contract (different underlying assets, but same type of market)

The underlying assets for this strategy are assets with the same types of market (companies with the same, or related businesses), see example in Attachment 2:

Examples

1. Long PTTZ09 and short PTTEPZ09
2. Short PTTEPM09 and long PTTM09

Objective of the Strategy

The investor expects the return of one underlying asset will outperform that of the other.

Example Mr. A expects the return of PTT to outperform that of PTTEP (the difference between their price returns in will increase).

Therefore, the investor can apply Inter-Market Spread by going:

- Long PTTM09 at Bt164 for 7 contracts
  (total contract values are 164 x 7 x 1,000 = Bt1,148,000)
- Short PTTEPM09 at Bt96 for 12 contracts
  (total contract values are 96 x 12 x 1,000 = Bt1,152,700)

When the investor needs to close his position, he can short PTTM09 for 7 contracts and long PTTEPM09 for 12 contracts

Tips

1. The transaction costs of this strategy are double that of a directional trading strategy.
2. A combination order cannot be used in conjunction with an inter-commodity spread trading strategy.

10.2.3 Inter-Market Spread

Strategy components

The inter-market spread comprises:

1. Long position in X futures contract
2. Short position in Y futures contract (different underlying assets and different type of market).

The underlying assets for this strategy are those categorized in different types of markets, see example in Attachment 2

Example

1. Long S50Z09 and short ADVANCZ09
2. Short PTTM09 and long S50M09

Objectives of the Strategy

The investor expects the return of one underlying asset to outperform that of the other, which is of a different market type.

Example Mr A expects the return of ADVANC to outperform that of the SET50 Index (the difference between their price returns will increase).

Therefore, Mr A can apply an inter-market spread by going:

- Long S50U09 at 300.8 points for 1 contract
  (total contract values are 300.8 x 1 x 1,000 = Bt300,800)
- Short ADVANCU09 at Bt75.9 for 4 contracts
  (total contract values are 75.9 x 4 x 1,000 = Bt303,600)

In order to close out the position, he can short S50U09 for 1 contract and long ADVANCM09 for 4 contracts.

Tips

1. The transaction costs of this strategy are double that of a directional trading strategy.
2. A combination order cannot be used with an inter-market spread trading strategy.

10.3 Arbitrage Strategy

In using an arbitrage strategy, the investor aims to make a virtually risk-free profit. In order to achieve this aim, a fair price must be calculated and compared with the spot price of the underlying asset, including its net costs. With that knowledge in-hand, investors will know when the arbitrage strategy can be applied and how much the net profit will be.

The fair price of Single Stock Futures

It can be computed using the following formula

$$F_{Fair} = [S - PV(Div.)] \times (1+ R)^{Day/365}$$

Where

F_{Fair}	= The fair price of the Single Stock Future
S	= The spot price of the underlying asset
PV(Div.)	= Present Value of the dividend with the ex-date within contract life
R	= Risk-free rate (%)

Day = Number of days to contract expiry

When to apply Arbitrage

Suppose F_{Market} is the market price of Single Stock Futures, an investor can consider applying an arbitrage strategy in the following conditions:

1. If $F_{Market} > F_{Fair}$ + trading cost of stock and futures (two legs)
   Short futures 1 contract and long stock 1,000 shares simultaneously
   The profit is equal to $F_{Market} – F_{Fair}$ - trading cost of stock and futures (two legs)
2. If $F_{Market} < F_{Fair}$ – trading cost of stock and futures (two legs)
   Long Futures 1 contract and short stock 1,000 shares
   The profit is equal to $F_{Fair} – F_{Market}$ – trading cost of stock and futures (two legs)

Tips

1. The number of shares to be traded under this strategy will be equal to the contract multiplier.
4. The investor must be careful about the contract multiplier after the ex-date.

Example

Underlying	Last	Date
PTT	186.00	24 Nov 08

Symbol	Ex-Date	Dividend (Baht/Share)	Days to Ex-date	Interest Rate	PV (Dividend)
PTT	18 Mar 09	5.5	114	4.00%	5.43
PTT	2 Sep 09	5.5	282	4.09%	5.33

The investors can calculate the Fair Price as per following

Series	Expiration Date	Days to Expiration	Interest Rate (%)	PV (Divdend)	Fair Price
PTTZ08	29 Dec 08	35	3.97%	0.00	186.70
PTTH09	30 Mar 09	126	4.01%	5.43	183.04
PTTM09	29 Jun 09	217	4.05%	5.43	184.88
PTTU09	29 Sep 09	309	4.11%	10.76	181.32

The trading cost of the stock (two legs) is about Bt0.60 per share.
The trading cost of futures (two legs) is approximately Bt0.42 per share.
Net cost (approximately) is Bt1.02 per share

Suppose

- $F_{Upper\ Bound} = F_{Fair}$ + trading cost of stock and futures (two legs)
- $F_{Lower\ Bound} = F_{Fair}$ – trading cost of stock and futures (two legs)

Some additional calculations can be made, as follow:

Series	Lower bound	Upper Bound
PTTZ08	185.68	187.72
PTTH09	182.02	184.06
PTTM09	183.86	185.90
PTTU09	180.30	182.34

Therefore, if the spot price of Single Stock Futures is lower than $F_{Lower\ Bound}$, the investor can apply the arbitrage strategy by going:

- Long futures 1 contract and short stock 1,000 shares simultaneously.
- The profit will be equal to ($F_{Lower\ Bound} – F_{Market}$) x 1,000 shares.

On the other hand, if the spot price of Single Stock Futures is higher than $F_{Lower\ Bound}$, the investor can apply the arbitrage strategy by going:

- Short futures 1 contract and long stock 1,000 shares simultaneously
- The profit will be equal to ($F_{Market} – F_{UpperBound}$) x 1,000 shares

Attachment 1

Examples of contract codes for Single Stock Futures using Single Orders

Contract Codes	Underlying Assets Stock Codes	Contract Months	Code	Contract Year	Code
PTTH09	PTT	March	H	2009	09
PTTM09	PTT	June	M	2009	09
PTTU09	PTT	September	U	2009	09
PTTZ09	PTT	December	Z	2009	09
PTTEPH09	PTTEP	March	H	2009	09
PTTEPM09	PTTEP	June	M	2009	09
PTTEPU09	PTTEP	September	U	2009	09
PTTEPZ09	PTTEP	December	Z	2009	09
ADVANCH09	ADVANC	March	H	2009	09
ADVANCM09	ADVANC	June	M	2009	09
ADVANCU09	ADVANC	September	U	2009	09
ADVANCZ09	ADVANC	December	Z	2009	09

Examples of symbols for Single Stock Futures using Combination Orders

PTT	PTTEP	ADVANC
PTT**H**09**M**09	PTTEP**H**09**M**09	ADVANC**H**09**M**09
PTT**H**09**U**09	PTTEP**H**09**U**09	ADVANC**H**09**U**09
PTT**H**09**Z**09	PTTEP**H**09**Z**09	ADVANC**H**09**Z**09
PTT**M**09**U**09	PTTEP**M**09**U**09	ADVANC**M**09**U**09
PTT**M**09**Z**09	PTTEP**M**09**Z**09	ADVANC**M**09**Z**09
PTT**U**09**Z**09	PTTEP**U**09**Z**09	ADVANC**U**09**Z**09

These combinations can be applied with all underlying stocks of the Single Stock Futures.

Attachment 2

Market type of each underlying asset

Underlying Asset	Market	Type of Contract	
		Futures	Options
SET50	Index	✓	✓
ADVANC	Single Stock	✓	
PTT	Single Stock	✓	
PTTEP	Single Stock	✓	
GF	Metal	✓	