SECP REVIEW COMMITTEE ON CFS MK-II

CFS MK-II REVIEW

Discontinuation of CFS and Deliverable Futures

April 14, 2009

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Preface

The Securities and Exchange Commission of Pakistan (SECP), in consultation with the relevant stakeholders has decided to constitute a committee comprising representatives of the three stock exchanges, National Clearing Company of Pakistan Limited, Mutual Fund Association of Pakistan (MUFAP), Pakistan Banks' Association (PBA) and senior securities market professionals/ stakeholders to review CFS MK-II in its entirety.

This committee is tasked to review CFS MK-II product. The Terms of Reference for the said Committee are as follows:

1. Review CFS MK II ('the product') in its entirety, with particular reference to risk management, eligible securities for financing, margin requirements etc.
2. Analyze the role of CFS MK-II as a leverage product during the recent stock market situation and draw conclusions.
3. Propose measures for further strengthening risk management of the product.
4. Recommend other leverage products in line with the best international practices.

Members of CFS MK-II Review Committee:

1.	Mr. Shehzad Naqvi, CEO*	The Royal Bank of Scotland Limited
2.	Mr. Asim Jang, CEO	Institute of Capital Markets
3.	Mr. Nasim Beg, CEO	Arif Habib Investment Management Limited
4.	Mr. Muhammad Aliuddin Ansari, CEO	Dewan Drilling Limited
5.	Mr. Aftab Manzoor, Chairman	Pakistan Banks' Association
6.	Mr. Muhammad Lukman, CEO	National Clearing Company of Pakistan Limited (NCCPL)
7.	Mr. Adnan Afridi, Managing Director	Karachi Stock Exchange (KSE)
8.	Mr. Yasin Lakhani, Member Director – KSE Board	Karachi Stock Exchange
9.	Mian Shakeel Aslam, Managing Director	Lahore Stock Exchange
10.	Dr. Arsalan Razaque, Member Director – LSE Board	Lahore Stock Exchange
11.	Mr. Aftab Ahmed Chaudree, Managing Director	Islamabad Stock Exchange
12.	Mian Humanyun Pervez, Member Director – ISE Board	Islamabad Stock Exchange
13.	Mr. Mateenullah Khan, Joint Director†	Securities and Exchange Commission of Pakistan

*Chairperson of the Committee
†Secretary to the Committee

Executive Summary

In order to safeguard our markets / investors, improve risk management and move to best international practices for leveraging products the Committee recommends that the CFS MK-II and Deliverable Futures products need to be discontinued and replaced by Cash Settled Futures (CSF) products. We expect cash settled futures to reduce the strain on the resources of the stock exchanges since settlement of price differentials does not involve delivery of the underlying shares. Furthermore, CSF will provide a strong foundation for development of other derivative products such as options. We note that the Boards of KSE and NCCPL, in addition to 103 members of KSE, have already recommended to discontinue CFS.

We feel there is a greater need to improve the protection provided to the stock exchanges through margins. We have learnt through experience that allowing margins in the form of securities permits inappropriately high leverage and create further selling pressure in the middle of a crisis. Therefore, subject to an implementation schedule to be agreed between the SECP and the stock exchanges, the Committee recommends that stock exchanges should collect margins for all leveraged products in cash only.

We recommend the introduction of client level margining at the stock exchanges. Members should be required to post margins linked to the positions taken by each of their clients (identified by UINs) without any netting across clients. The motivation is to achieve segregation of client funds and avoid co-mingling, unauthorized netting and misuse of client funds. Implementation will require further development of the IT infrastructure at the exchanges. The stock exchanges need to work with SECP in order to agree an appropriate implementation timeframe.

We recommend that the current Special Margins on leverage products be replaced with Concentration Margins which shall also be applicable on Ready Market segment. The Concentration Margins are targeted to those investors generating the largest risk for the exchanges and therefore are more likely to provide mitigation for the risk.

We have also noted that the current circuit breakers at the stock exchanges are inflexible, inappropriately narrow, prevent exit for investors and can inhibit price discovery resulting in increased risk. Therefore, in line with best international practices, the Committee recommends that the exchanges should gradually widen script level circuit breakers and introduce index based market wide coordinated trading halts as a cooling off mechanism and to collect margins. We envisage that trading would restart the same day after collection of margins. We recommend a schedule to gradually phase in wider circuit breakers and market halts in order not to damage the “value at risk” based risk management system of the exchanges.

The Committee proposes Cash Settled Futures as the primary financing product. Cash Settled Futures should be offered both for single equities as well as for the Stock Index (KSE-30).

There were two schools of thought within the Committee regarding the selection of equities to be eligible for Cash Settled Futures:
(1) Restrict only to five most liquid majority Govt Owned Companies and the Stock Index (KSE-30)
(2) Allow 10-15 Scrips meeting transparent eligibility criteria for Cash Settled Futures.

> The Chairperson of the Committee recommends: (1) initially only five most liquid majority Govt owned Companies should be eligible for Cash Settled Futures (2) the stock exchanges to expedite efforts for the setting up and implementation of a real time market surveillance mechanism to detect market manipulation and abuse (3) once an effective market surveillance mechanism is in place, the number of scrips eligible for Cash Settled Futures can be increased to 10-15 according to a transparent criteria.

The Committee understands that some market participants will be unable to use cash settled futures as a financing product. Currently some Mutual Funds may face regulatory or charter restrictions and Islamic Funds will need to comply with Shariah requirements. In order to address these issues, we recommend that the SECP should work with the mutual fund industry to remove regulatory restrictions barring mutual funds from using cash settled futures products.

However, those mutual funds facing charter restrictions, will have to find other market participants (such as conventional or Islamic banks) with whom they can transact on a bilateral basis in products permitted by their charter (such as Equity Repos or Shariah compliant products). These other market participants will have to find other ways to hedge themselves and appropriately price any residual risk kept by them. We recommend that the SECP should work with the State Bank of Pakistan, the Pakistan Banks Association and Mutual Fund Association of Pakistan to encourage the banking industry to provide efficient risk management solutions to those mutual funds that are unable to use CSF.

In order for the cash settled futures products to be successful, it is important to have a strong two way link between the spot and futures markets. Therefore a robust Securities Lending and Borrowing ("SLB") system needs to be in place. We understand that the SECP is currently working on regulations for the SLB system and these will be approved as part of the wider package of risk management measures. We recommend that the Securities Lending and Borrowing System to be operational in three to four months (i.e., by 30 June 2009).

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A Case for Discontinuing Continuous Funding System (CFS) and Deliverable Futures

Introduction

The committee recommends that both CFS and Deliverable Futures should be discontinued entirely. Easy access to CFS has – in our view – led to over-leveraging in the marketplace, leading to price bubbles which are detrimental to long-term investors whom the stock exchanges wish to attract. Furthermore, given the fact that use of CFS and Deliverable Futures has the potential to skew incentives for brokers – possibly leading to market abuse through the 'pump and dump' strategy – we recommend that Cash Settled Futures (CSF) be used in their place. This more transparent product will allow for all participants to express their views in the marketplace while significantly reducing the systemic risk that exists under the present set-up. In this vein, we also recommend more stringent mark-to-market requirements to reduce default risk and expanding current circuit breakers to better enable the stock exchanges to fulfill its price-discovery mechanism.

All these recommendations are discussed in detail in the next chapter. Here we will examine the problems caused by use of CFS and Deliverable futures. The main problem is the systemic risk caused by over-leveraging, followed by the potential of conflict of interests from the broker's perspective – the "pump and dump" problem.

CFS Transactions – Connection between Over-Leveraging and Systemic Risk

The primary users of CFS financing are speculators, who wish to take un-hedged positions in the marketplace without being able to fully finance them, forcing them to obtain financing from brokers or other sources. It is widely believed that such transactions are necessary for providing liquidity to the market. The speculator – the main driver of this liquidity – is able to multiply the sizes of transactions through this easily accessed leverage; while this indeed provides a multiplier effect to liquidity, we believe that this leads to an unacceptable level of systemic risk.

Why do CFS transactions cause Systemic Risk?

1. A speculator buys in the ready market – taking delivery of the stock – leveraging through CFS/Bank Margin Finance. Deliverable Futures allow purchase against settlement on a future date.

2. As the stock exchanges rarely have short sellers for the future date, the bulk of the deliverable futures are bought from sellers who buy and hold stocks till the settlement date and earn the price differential between the ready and futures markets. Additional – potentially non sustainable – demand for stocks is created by the quantum of this type of leverage finance.

   Prices are thus pushed up by the one sided leveraged buying in the ready market. The size of leveraged speculative demand can exceed long-term investor demand by several multiples. Over a period of time, this creates speculative bubbles.

3. In a bear market, the unwinding of these transactions in the ready market causes the pendulum to swing to the other extreme. The settlement of CFS has a direct impact on the ready market, as one leg of the transaction coincides with the ready market settlement. This shall always have potential to cause a systemic risk.

   A major unwinding will exaggerate the downward slide and normal margins may not suffice, causing a widespread settlement failure. This exaggerates the price volatility swings, causing huge systemic risks – historically solved by stock market bail outs.

Advantages of CSF:
As opposed to CFS, CSF transactions have speculative activity on both sides as two sides are needed to consummate a transaction. The buying and selling act as a countervailing force, reducing the tendency for one-sided speculation and – consequently – one-sided price movements. Also, the settlement of price differentials does not involve delivery of underlying shares, thus unwinding of a long position does not cause stress in the ready market. Furthermore, our recommendations of more stringent daily mark-to-market requirements – mandating exclusive use of cash as opposed to shares – will further increase transparency in this market.

We believe that these changes will increase long-term investor demand that is the true growth driver of the stock exchanges while curtailing over-leveraged speculative activity as well as reducing potential for a broker to have a conflict of interest.

Market abuse: The “Pump and Dump” Problem

There is much speculation in the marketplace that – given the tendency of speculators to be leveraged long – brokers have an incentive to consistently talk up share prices and then unload them while simultaneously removing the CFS financing available to their clients, causing a dive in the stock indices. This is the oft-discussed “pump and dump” which many have accused of causing earlier systemic failures. We also note that the frontline regulators of CFS and Deliverable Futures are under the strong influence of market participants and decision making cannot be free of conflicts of interests when it comes to these matters.

CSF – because it does not actually involve underlying delivery of shares – will remove the potential for this issue, creating greater transparency in the market.

Other Reasons

There are a variety of other reasons that also caused us to recommend discontinuing CFS and Deliverable Futures. They include:

1. No economic justification for blocking capital

Capital is scarce; using this scarce resource to fund speculation through the ready market is an inefficient use of capital. It results in higher price volatility, which is detrimental from an investor’s perspective but can result in opportunities for a speculator. Since it is the investor that the stock exchanges primarily wish to attract, we wish to discourage high volatility in the marketplace.

2. Leverage vs. Volatility

Leverage and the consequential additional liquidity result in lowering of impact cost (spread between bid and offer). However, the higher volatility may well be responsible for the stunted of growth of the equity market. We feel that the trade-off should be in favor of lower volatility and more participants, which in turn will improve liquidity and reduce impact cost.

3. Flawed Risk Management Procedures/Price Bubbles

Credit needs to be regulated by the central bank. In the US, the Federal Reserve Board regulates the level of margins that must be maintained by all margin buyers of shares. The CFS market and the Deliverable Futures are not under any sort of State Bank Regulation. Therefore these tend to contribute towards creation of asset price bubbles, given the fact that many clients avoid paying the required margins anyway.

The stock exchange and the clearing house do not have the mandate or the capacity to regulate credit and prevent creation of asset price bubbles.

4. Alternate Products

Although the stock exchange has introduced CSF, these have not taken off in the presence of CFS and Deliverable Futures. Other intended initiatives of launching derivatives by the stock exchange may meet the same fate till this easy access to leverage is removed. Given the significantly reduced riskiness of CSF, we believe it must be encouraged.

Conclusion

As the time of writing, the Boards of KSE and NCCPL have already passed resolutions recommending doing away with CFS. 103 Members of KSE have also given in writing their view to discontinue CFS. We concur with this view and strongly recommend that both CFS and Deliverable Futures be discontinued.

We recommend that Deliverable Futures be discontinued before the April 2009 contract opens. CFS can be discontinued with a two-week notice. However, all financing existing under the CFS must be allowed to be rolled over for three cycles so as to prevent any undue squeeze. This is an opportune time to do away with both these products, as the outstanding sums involved are small and are not likely to cause any stress in the market.

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Recommendations for Financing Products

Introduction

Systemic crises are truly destabilizing events, characterized by (i) a sharp fall in prices, (ii) bankruptcy by one or more large players with fears of payments crises, and (iii) a sharp worsening of market liquidity.

Introducing ad-hoc measures such as – imposing a floor, setting additional margins or banning short selling – further reduces liquidity. A more effective response would include a coordinated effort to address the liquidity issue, as sentiments cannot be controlled by taking ad-hoc measures and hence such measures should be avoided at all costs.

We believe the recommendations below will help to resolve the structural imbalances within the stock exchanges that led to systemic crises in the first place.

1. Discontinue CFS and Deliverable Futures.
2. Accept only cash for margins and collateral for all leverage products.
3. Widen Scrip Level Circuit Breakers & the Introduction of Market wide Trading Halts.
4. Financing Products: Introduction of cash settled single stock futures and stock index futures contract with KSE-30 as an underlying. See Appendix A for details. An example of the use of single stock futures for financing is given in Appendix B.
5. Introduction of Spread Discounts.
6. Daily Settlement Methodology.

Other recommendations:

- Stock exchanges to do away with minimum lot sizes in the Ready Market.
- Stock exchanges to introduce a separate functionality for investors to purchase the index in the Ready Market.
- Stock exchanges to allow the use of a third party software for simultaneous execution of cash and carry arbitrage trades by Financiers.
- Introduce Central Counterparty Clearing & Settlement Guarantee.
- SECP to ensure that SLB is available to market by June 30, 2009.
- Distinguish between Creditworthiness (Networth) and Solvency (Net Capital Balance)
- SECP to impose mandatory disclosure requirement for Net Capital Balance of a broker to general public through websites of the stock exchanges.
- Authorize Mutual Funds to participate in the Cash Settled Futures Segment.
- Move to Client Level Margining and segregation of client funds (See Appendix C).
- Current Special Margins on leverage products be replaced with Concentration Margin which shall also be applicable on Ready Market segment. (See Appendix E).
- Support from SECP for timely implementation of reforms.
- Support from institutional investors for promoting new products.

Details of Product and Structural Recommendations

Recommendation 1: Discontinue CFS and Deliverable Futures

(Discussed in chapter one)

Recommendation 2: Accept only Cash for Margins and Collateral for Leverage Products

The KSE Board with prior approval of the SECP has amended Regulations Governing Risk Management of the Exchange to collect VaR margins as cash or cash equivalents for all leverage markets including Deliverable Futures, Cash-Settled Futures and Stock Index Futures, which was sent for gazette notification on March 02, 2009. The Board also requested NCCPL to amend its regulations governing CFS Mk-II to collect Cash or Cash equivalents as margins for CFS Mk-II market.

Recommendation 3: Widen Circuit Breakers & Introduce Trading Halts: Phasing Out Plan

After the thorough review of practices across other jurisdictions, this committee recommends an index based market wide circuit breaker system, which will apply at three stages of the index movement either way at 5%, 7.5% and 10%. These circuit breakers will bring about a coordinated trading halt in all equity and equity derivative markets. The market wide circuit breakers would be triggered by a movement of the KSE-30 index.

Month-1

In case the KSE-30 index continues to trade 3% up or down for consecutive five minutes from its opening index value, there would be a ten minutes cooling off period. All orders will be cancelled, and the market will have a pre-open session of five minutes and market will re-open.

Subsequently, if the KSE-30 index continues to trade 5% up or down for consecutive five minutes from its opening index value, there would a 1-hour market halt. If the movement takes place two hours before the closure of market, there will be a trading halt for ½ hour. In case the movement takes place in the last one hour of the market there would be no market halt. In case of a market halt, the following procedure will be adopted:

- All orders will be cancelled, and margins will be collected. Upon completion of the market halt period, the market will open with a pre-open session of five minutes.
- In case the KSE-30 index continues to trade 5% up or down for five minutes consecutively from its opening index value for the second time, the market will be closed for the rest of the day.

Months (2-7)

In case the KSE-30 index continues to trade 3% up or down for five consecutive minutes from its opening values, there would a cooling off period of ten minutes implemented as above.

Further, if the KSE-30 index continues to trade 5% up or down for five minutes consecutively from its opening index value, the KSE would implement the first market halt in same manner as above, subsequent to which the market will re-open.

In case the KSE-30 index continues to trade 7.5% up or down for five minutes consecutively from its opening index value, the market will be closed for the rest of the day.

<u>Month-8-onwards</u>

The KSE will operate with one cooling-off period and two market halts in the following manner:

- Upon a 5% movement, a cooling-off period as above will be observed.
- Upon a 7.5% and 10% movement of the KSE-30 index, market halts will be initiated as above.

In case the KSE-30 index continues to trade 10% up or down for five minutes consecutively from its opening index value, the market will be closed for the rest of the day.

These percentages may be translated into absolute points of index variations on a monthly basis during the transition and on a quarterly basis subsequent to the transition period. At the end of each quarter/month these absolute points of index variations would be revised and made applicable for the next quarter/month.

<u>Recommended Schedule of Widening Scrip Level Circuit Breakers and Phasing-in of Market based Trading Halts</u>

<table>
<tr><td rowspan="3">Month</td><td colspan="4">Recommended Scrip Level Circuit Breakers</td><td colspan="3" rowspan="2">Recommended KSE-30 based Market Halts/Cooling off periods</td></tr>
<tr><td colspan="2">KSE30 Companies</td><td colspan="2">Other Companies</td></tr>
<tr><td>From</td><td>To</td><td>From</td><td>To</td><td>First</td><td>2nd</td><td>3rd</td></tr>
<tr><td>First</td><td>5%</td><td>7.5%</td><td>5%</td><td>7.5%</td><td>3%</td><td>5%</td><td>5% Mkt-Halt</td></tr>
<tr><td>2nd</td><td>7.5%</td><td>10%</td><td>7.5%</td><td>10%</td><td>3%</td><td>5%</td><td>7.5% Mkt-Halt</td></tr>
<tr><td>3rd</td><td>10%</td><td>11%</td><td>10%</td><td>12.5%</td><td colspan="3" rowspan="4">Circuit breakers cannot be removed or widened instantly; as the loss expectancy calculator (VaR) currently caters for only 5% price movement risk on EOD basis. Along with this KSE should get their risk meter is enhanced to cater intra-day volatility.</td></tr>
<tr><td>4th</td><td>11%</td><td>12%</td><td>12.5%</td><td>15%</td></tr>
<tr><td>5th</td><td>12%</td><td>13%</td><td>15%</td><td>17.5%</td></tr>
<tr><td>6th</td><td>13%</td><td>14%</td><td>17.5%</td><td>20%</td></tr>
<tr><td>7th</td><td>14%</td><td>15%</td><td>17.5%</td><td>20%</td><td>3%</td><td>5%</td><td>7.5% Mkt-Halt</td></tr>
<tr><td>8th</td><td>15%</td><td>15%</td><td>17.5%</td><td>20%</td><td>5%</td><td>7.5%</td><td>10% Mtk-halt</td></tr>
</table>

*Enclosed as Appendix D is the Indian capital markets experience.

Recommendation 4: Financing Products

The Committee proposes Cash Settled Futures as the primary financing product. Cash Settled Futures should be offered both for single equities as well as for the Stock Index (KSE-30).

There were two schools of thought within the Committee regarding the selection of equities to be eligible for Cash Settled Futures:

1. Restrict Only to Five Most Liquid Majority Govt Owned Companies and the Stock Index (KSE-30)
   This group felt that since Cash Settled Futures will be cash settled on maturity, the theoretical futures prices will be based on the spot price (in case two trading activity based filters fail at the end of the day)
   Since the spot price could be vulnerable to locks there would be an opportunity for "pump and dump" manipulators to exit the large futures position more easily than the same sized deliverable ready position.
   There could also be scope for manipulation by sponsors (who may have control of large hidden undeclared blocks of shares).
   Therefore, this group recommended that only the five most liquid majority Govt owned companies and the Stock Index (KSE-30) should be eligible for the Cash Settled Futures Contract. This group also recommended that this list of eligible equities should not be expanded in the future.

2. Allow all Scrips meeting transparent eligibility criteria for Cash Settled Futures:
   This group proposed below eligibility criteria and recommended that all scrips meeting this criterion should be allowed for Cash Settled Futures. Their concern was that the product would fail if it is too narrow in scope. They proposed that manipulation should be restricted through effective surveillance by the Exchanges.

Investigation by Regulatory Body	Companies that are not subject to investigation by any regulatory body
Defaulter/Inquiry	Companies not on Default Counter and have no pending inquiry against them by the authorities.
Days Traded	90% of days traded during a review period
Impact Cost	<1.00% of daily impact cost through out review period on an order size of RS. 500,000/=
Market Price	Market Price >Par for 50% days of a review period
Free Float	Free Float>20% of issued capital or 45 Million
Ineligible Scrip	Asset Management Companies, Mutual Funds, Brokerage Houses registered with SECP
Review Period Horizon	6 Months

The Chairperson of the Committee recommends: (1) initially only five most liquid majority Govt. owned Companies should be eligible for Cash Settled Futures (2) the stock exchanges to expedite efforts for the setting up and implementation of a real time market surveillance mechanism to detect market manipulation and abuse (3) once an effective market surveillance mechanism is in place, the number of scrips eligible for Cash Settled Futures can be increased to 10-15 according to a transparent criteria.

Further details regarding Cash Settled Futures:

- Re-launch 90-day Cash Settled Single Stock Futures and Stock Index Futures.
- Each month a new 90-day contract is listed.
- Expiration on last Friday of the month.
- Rs.250K Basic Deposit shall be utilized towards adjusting intra-day margin requirements. Un-squared positions at EOD shall attract margin calls so as to top-up the 250K Basic Deposit to it's initial level.
- Upon reaching an open interest of Rs. 10 Billion, the 250K Basic Deposit shall be increased to 0.5 Million.

- Followed by Options.

*Please refer to the Appendix A for details on the Daily Settlement Price (DSP), Final Settlement Prices (FSP), and details on Stock Index futures.

Recommendation 5: Spread Discounts

A Calendar Spread position in terms of futures trading is defined as the purchase of a particular futures contract and sale of the same futures contract with a different expiration date on the same exchange. The only variable is the interest rate, hence low risk. The margin is applicable on only one leg, higher of the two legs, of the contracts.
The discount is done away with 5 days prior to the expiration.

Recommendation 6: Daily Settlement Methodology

Daily Settlement (Mark-to-Market) aims to extract credit risk from the market. The viability of each position is checked each day; therefore very few trades will end up in default. It is observed that the Mark to Market price could be prone to manipulation. Therefore there needs to be a transparent methodology for the Daily Settlement Price.

* Please refer to Appendix A for a Transparent Methodology of the Daily Settlement Price (DSP)

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Securities Lending and Borrowing (SLB)

SLB is an essential component for the success of CSF. The system allows for the borrowing of securities with an obligation to redeliver the same securities in the same number and at an agreed rent on a future date. The potential lenders and borrowers should be Clearing Members of the NCCPL and can include be the brokers, mutual funds, pension funds, banks, asset management companies, insurance companies and other companies managing large equity portfolios.

While the lender benefits by earning income/return on his idle securities, the borrower benefits by having the option to utilize the SLB functionality for the purposes of avoiding delivery failures in ready/future market; and honoring delivery obligations after affecting the short sale. Furthermore, the lender retains the right to any economic benefit associated with the lent securities.

<u>Securities Lending and Borrowing (SLB) Models</u>

1. <u>Managing Delivery Failure of Ready/Future Market</u>
   The SLB facility's solution for managing the delivery failures includes the CM borrowing the securities on Trade (T) day from the SLB market. In such a case, the delivery obligation of the CM shall be zero on T+2 i.e. on the settlement day. Subsequently, the NCCPL shall borrow the securities on the settlement day i.e. on T+2 day from the SLB market. The delivery defaulter would also borrow directly from the SLB market so as to complete the settlements of that day. In such a case, the lender should deliver the security (ies) on same day; and the SLB facility may also be utilized for the fulfillment of the delivery obligation of a deliverable futures contract closed on its maturity.

2) <u>To Facilitate the Market Participants Affecting Short Sales</u>
   SLB is an effective tool for short sale as market participants can meet the delivery obligation before affecting the short sale by utilizing the SLB facility. Ready Market short sell and SLB borrowing transactions shall be settled on a net basis through NCSS, whereby the BO of the borrower in terms of delivery, becomes zero.

<u>Modus Operandi</u>

The SLB market should run parallel to the Regular Market and the settlement of the SLB transactions should be on a T+2 basis, as the Regular Market trades are settled in the same way. Furthermore, each SLB contract will be locked in for 5-working days for both the lender and borrower and after 5-working days only the borrower will have an option to release the SLB transaction. However, after 22-working days, both the lender and borrower will have an option to release or continue the SLB contract.

<u>Risk Management</u>

The borrower shall pay 100% margin in terms of cash, of the borrowed securities to the NCCPL against the SLB transactions on a pre-trade basis. The mark-to-market losses shall be collected from the borrower on a daily basis in the form of cash only and the NCCPL shall hold such margins and mark-to-market till the settlement of the SLB transaction. If the borrowers/lenders fail to return/deliver the securities that have been borrowed / lent, on the settlement day, the NCCPL will initiate the buy-in or close out process in accordance with NCCPL Regulations. Also, if the lenders/borrowers fail to meet their settlement obligations and/or fail to pay margins and mark-to-market- losses, they would be considered defaulters in terms of NCCPL Regulations.

<u>Progress</u>

The concept paper has been finalized and agreed to by all stake holders in August 2008. Accordingly, the SLB Regulations have been approved by the NCCPL Board and submitted for the Commission's approval. The system development process has been initiated and hopefully will be made available within a three month period.

Appendices

Appendix A

Current Financing Products

Product	Settlement Basis	Since
Ready Market	T+2	2001
Deliverable Futures	30 Days	2003
Cash Settled Futures	90 Days Standardized	2007
COT (Stopped in 2005)	22 days	1994
CFS (Replaced COT)	22 days	2005
Stock Index Futures	90 days contract	2008

Risk Mitigation Feature of Current Financing Products

Category	CSF	SIFC	DFC	CFS	READY
Exposure Margin	VaR Based	12.5%	VaR Based Additional 50% CASH	▪ VaR based Initial Margins (in cash and/ or eligible securities). ▪ 50% additional VaR based margin (in cash). ▪ 10% additional margin on all open positions (in securities).	VaR Based
Mark-to-Market	100% in Cash	100% in Cash	100% in Cash	100% in Cash	100% in Securities/Cash
Special Margins	N/A	100% in Cash	50% in Cash and 50% Securities	100% Cash/Securities	N/A
Collateral	Cash / Securities (haircuts applicable)	Cash / Securities (haircuts applicable)	Cash / Securities (haircuts applicable) based on exposure slabs as per Risk Management Regulations	Cash / Securities (haircuts applicable)	Cash / Securities (haircuts applicable)
Circuit Breakers	Standard @ 5%	7.5%	Standard @ 5%	Open	Standard @ 5%

Current Position Limits

Category		CSF	SIFC	DFC	READY
Position Limit	Market Wide	40% of free float for each security	Not Applicable	40% of free float for each security	100% of free float
	Member Wide	10% of free float of the security for a Member.	10% of the total open interest or 10,000 contracts (whichever is higher)	10% of the above mentioned market wide position limit for each security.	No limit
	Client Wide	5% of free float of the security for a member's individual clients. For financial institutions and mutual funds clients trading at the KSE, each such institution will have a limit of 5% of the free float. (Client position will be universal and determined on UIN basis)	1% of the total open interest or 1,000 contracts (whichever is higher)	5% of the above mentioned market wide position limit for each security for a member's individual clients. For financial institutions and mutual funds clients trading at the KSE, each such institution will have a limit of 5% of the market wide position limit mentioned above. (Client position will be universal and determined on UIN basis)	No limit

Current Product Specific Eligibility Criteria

Criteria	CSF	DFM	CFS
Market Price	Market Price >Par for 50% days of a review period	Market Price >Par for 50% days of a review period	Market Price >Par for 50% days of a review period
Free Float	Free Float>20% of issued capital or 45 Million	Free Float>20% of issued capital or 45 Million. Newly Listed Companies to have with at least RS 1BN free float Capitalization.	Free Float>20% of issued capital or 45 Million. Newly Listed Companies to have with at least RS 1BN free float Capitalization.
Profit	Operating Profit before tax in last 2 years.	Operating Profit before tax in last 2 years.	Operating Profit before tax in last 2 years.
Ineligible Scrip	Asset Management Companies, Mutual Funds, Brokerage Houses.	Asset Management Companies, Mutual Funds, Brokerage Houses.	Asset Management Companies, Mutual Funds, Brokerage Houses.
VaR	N/A	N/A	N/A
Review Period Horizon	3 Months	6 Months	6 Months

* Note that eligible scrips for each product are mentioned in the appendix.

Circuit Breakers: An Impediment in the Current System

What are Circuit Breakers?

These are instruments used by stock exchanges around the world that restrict volatility by stopping the trading of a particular stock/entire exchange if it rises/falls by a certain amount each day. The KSE currently halts trading of any scrip that rises/falls by more than 5% on any day.

The obvious benefit of such circuit breakers is that they protect clearing-house risk by avoiding large defaults as well as providing time-outs to traders in over-heated market situations. However, they also have several disadvantages – tight circuit breakers have been known to hinder market development across the world since they (i) deny entry to bargain hunters, (ii) obstruct investors who are seeking to exit the market as well as (iii) act as an impediment to the introduction of derivatives.

Committee Recommendation:

The committee feels that the KSE's current tight circuit-breakers – tighter than most exchanges across the world – are inhibiting the price-discovery mechanism of the KSE. As such, the committee supports the idea of a staggered increase in the level that prices can fluctuate before trading is halted.

Appendix B

Market Review, Current Eligible Scrip in Leverage Markets

Leverage Counters	Horizon
Continuous Funding System	ABL,AHBL,AHSL,AICL,AKBL,ANL,APL,ATRL,BAFL,BAHL,BOP,CSAP,DCL,DGKC,EFUG,ENGRO,FABL,FCCL,FFBL,FFC,HBL,HUBC,ICI,INDU,JSBL,JSCL,LUCK,MCB,MEBL,NBP,NCL,NETSOL,NIB,NML,NRL,OGDC,PACE,PAEL,PICT,PKGS,POL,PPL,PRL,PSO,PTC,SNBL,SNGP,SPL,SSGC,TRIPF,UBL,WTL
Deliverable Future Contract	AICL, KAPCO, ABL, LUCK, AHBL, MCB, AHSL, NBP, AKBL, NRL, ATRL, NETSOL, ANL, NIB, BAFL, NML, BOP, OGDC, CSAP, PACE, DGKC, PKGS, ENGRO, POL, FABL, PPL, FFBL, PSO, FFC, PTC, FCCL, SPL, HBL, SNBL, HUBC, SNGP, ICI, SSGC, JSCL, UBL, JSBL, WTL
Cash Settled Futures	FFCB,ABL,HBL,OGDC,AHSL,AICL,AKBL,ANL,ATRL,BAFL,BAHL,CSAP,ENGRO,FABL,FCCL,FFBL,HUBC,ICI,JSCL,KAPCO,LUCK,MCB,NBP,NETSOL,NML,PACE,PICT,POL,PPL,PRL,PSO,SNBL,SNGP,UBL,WTL

Cash Settled Futures

Contract Duration	90 days
Contract Start Date	Each month a new 90 days contract will be listed on the 1st of the month.
Contract End Date	Last Friday of the calendar month, if last Friday is not a trading day, then immediate preceding trading day.
Daily PLS Settlement	There shall be Daily Clearing at the Daily Settlement Price of the day and MtM Losses/Profits shall be settled on in the following manner: (a) Net MtM Losses shall be collected from Members in cash on T+0 settlement basis (by day-end on trade day) through Clearing House or Clearing Company. (b) Net MtM Profits shall be disbursed to Members in cash on T+1 settlement basis through Clearing House / Clearing Company. (c) Scrip-wise outstanding position of Brokers will be revalued at relevant Daily Settlement Price except in case as explained in the provision given below. The system will consider such revalued amounts as traded values for collection of mark-to-market losses and for making payment of mark to market profits.
Final Settlement	To be settled at the value of the underlying in the Ready Market Upon closing of Contract, final settlement shall take place on T+1 basis and the resulting profits or losses, calculated on the basis of “Final Settlement Price” shall be settled in cash. The payment and collection of profits or losses on final settlement to/from Brokers shall be carried out by the Clearing Company within the stipulated time and in the prescribed manner.

Cash Settled Futures: Daily Settlement Price

Daily Settlement Price, determined by the Exchange at the end of every trading day, would be based on the following criteria:

- The Exchange will run a pre-close session in the last 15 minutes of trading each day. Consensus Price will be determined in this session, if the number of contracts traded at the end of pre-close session is greater than or equal to 50, and the number of market participants is greater than or equal to 20 who are clients of at least 5 brokers; else
- Last 0.5 hour of Futures Volume Weighted Average Price (VWAP), if the number of contracts traded during last 0.5 hour is greater than 50 and the number of market participants are greater than 40 who are clients of at least 10 brokers as shown in Appendix B; else
- Theoretical futures price

Theoretical futures price will be calculated as International Spot Price*{e^(r*t)}, where r = linear interpolation of 1-week, 2-weeks, 1-month, 2-month, 3 –month, etc. Karachi inter bank offer rate (KIBOR) as disseminated by Reuters, and t = time remaining till maturity. An example of the Theoretical Price Calculation Methodology is shown hereunder;

Theoretical Futures Price Calculation

Prices for Analysis:

Today: 8/3/09

Spot Price of OGDC: Rs56.00

Maturity Date: 28/3/09

Time to Maturity: 20 = (20/365.25) = 0.05475702

KIBOR	Days	Rate
1 week	0.01916	12.58
2 weeks	0.03833	12.83
1 month	0.08333	13.43
3 months	0.25	14.03
6 months	0.5	14.35
9 months	0.75	14.53
12 months	1	14.79
3 years	3	14.91

Using Linear Interpolation Function in Excel, we obtain:

Today	8-Mar-09	20 days	
Expiry	28-Mar-09		
Time to Maturity	0.54757	KIBOR	13.05%

Futures Price of OGDC: Using $F_t = S_0 e^{rT}$

Spot Price * EXP(13.05% * 0.054757)

56 * EXP(13.05% * 0.054757) = 56.4016

Theoretical Futures Price = 56.4016

Cash Settled Futures: Final Settlement Price

The average bid / ask quote of the scrip in the Ready Market which would be calculated as a ratio of A/B where “A” equals the sum of market bid and ask prices taking the best bid and best ask prices of the scrip during each one minute interval for last two hour trading.

S#	One Minute Interval	BID X	ASK Y	Sum X + Y
1	12:15	47.2	47.25	94.45
2	12:16	47.2	47.25	94.45
3	12:17	47.15	47.2	94.35
…	…	47.15	47.2	94.35
…	…	47.1	47.15	94.25
…	…	47	47.15	94.15
…	…	47.4	47.45	94.85
108	14:12	47.35	47.4	94.75
109	14:13	47.4	47.45	94.85
110	14:14	47.35	47.4	94.75
			Total	10414

Total Bid Count	110	
Total Ask Count	110	
Final Settlement Price (FSP)		
FSP =	10414.95	/220
FSP =	47.350682	

Committee Recommendation, Stock Index Futures

Stock Index Futures is simply buying or selling a specified number of contracts, whose mark-to-market difference is settled in cash on daily basis.	
Contract Duration	Standardized 90 days Contracts
Contract Start Date	Each month a new 90 days contract will be listed on the 1st of the month.
Contract End Date	Last Friday of the Month
Daily Settlement	Please see Daily Settlement Methodology
Final Settlement	To be settled to the value of the underlying in the Ready Market
Contract Multiplier	RS 5/=, Minimum Fluctuation one index point of KSE-30
Contract Unit	Numerical Value of underlined Index i.e. KSE-30
Exposure Margin and Deposits	12.50% or KSE-30 VaR whichever is higher
Position Limits	Need to increase narrow position limits imposed by SECP

Appendix C

<u>Example of Cash and Carry Arbitrage in OGDC</u>

Prices for Analysis:

Today:	7/3/09
Spot Price of OGDC:	Rs56.00
Expected Return on Investment:	16% (Say KIBOR + 5%)
Maturity Date:	28/3/09
Time to Maturity:	21 = (21/365.25) = 0.05749487
Futures Price of OGDC:	Using $F_t = S_0e^{rT}$ Spot Price * EXP(16% * 0.05749487) 56 * EXP(16% * 0.05749487) = 56.52

Lender should go Short in OGDC Futures at Rs56.52 and Long in OGDC in the Spot Market at Rs56 to earn a Return of 16% per annum.

Appendix D

Proposed Mechanism for Client Level Margining

Margin Requirements against Clients' Business:

- Post Trade Margins

  a. CDC should be requested to provide UINs of all sub-accounts family and House Account under a particular CDC Participant along with the details of pledge transactions in favor of the Exchange or Clearing Company.

  b. The Exchange and Clearing Company need to develop Securities Management System (SMS) for maintaining UIN-wise Securities Deposits.

  c. Margin Requirement against VaRs and Concentration Margins of each UIN should only be fulfilled from respective UIN-wise Securities Deposits.

  d. Any deficit of Margins Requirement from any UIN should be treated as failure by the broker, even if, there may be excess margins are deposited by the broker through other UINs' sub-accounts.

  e. Broker may specifically authorize the Exchange to utilize his margins deposited though his House Account to be utilized against any shortfall in the margin requirement on account of his clients' books (UINs).

- Pre-Trade Margins

  Before start of trading, position of all UINs against which respective UINs have deposited collateral will be set aside (excluded) from the Broker's overall Exposures along requisite margins, during the day trading any excessive deposits from House Account will be checked clients' UIN-wise overall shortages.

Margin Requirements against Financial Institutions' Business, who are NCCPL Brokers:

- In case of FIs, if they are the Broker of the NCCPL, a mechanism will be developed to allow utilization of margin deposited through CDS House Accounts for intra-day margin requirements.

- At the day-end, FIs will be required to deposit their margins directly with NCCPL.

- Based on NCCPL confirmation, the Exchange will free margins allocated to FIs' Exposures for Pre-Trade Margining purposes.

Margin Requirements against Proprietary Books' Business:

- All proprietary UINs (accounts) should be marked in UIN system with identification by the broker as to whom they belong to and same should be verified by the National Clearing Company based on proper evidences.

- Securities, Cash and/or Bank Guarantee deposited on account of proprietary books will be accounted for against all Margin Requirements on Proprietary business of the Brokers.

For Cash and Bank Guarantee against Margins:

- Cash and Bank Guarantee will Accounted for like House Account:

  Cash and Bank Guarantees deposited as collateral will be treated as Securities Deposit from House Account to over-up only those UINs who are in short of their collateral requirements all times.

- Cash and Bank Guarantee Amounts to be Adjusted against Specific UINs

  Cash and Bank Guarantee Adjustment Forms (Screens) will be provided to each Broker on Securities Management System (SMS) for splitting amounts against Margin Requirement of different UINs; however, the Broker should have back-office support for allocating Cash and Bank Guarantee amounts to such UINs and may be checked through inspections/audit.

  During a specified time before opening of daily Market, the Brokers should be authorized to reshuffle Cash amounts among different UINs; however, SMS should not allow reshuffling amount from any UIN which resultantly creates deficit in the Margin Requirements, to other UIN.

Broker should be required to submit necessary evidences with the Exchange or Clearing Company favoring reshuffling of Cash amounts as and when any change are affected in SMS.

Appendix E

Index based market wide circuit breaker

As per SEBI Circular Ref. SMDRPD/Policy/Cir-35/2001 dated June 28, 2001, it has been decided to implement with effect from July 02, 2001, an index based market wide circuit breaker system, which will apply at three stages of the index movement either way at 10%, 15% and 20%. These circuit breakers will bring about a coordinated trading halt in all equity and equity derivative markets nationwide.

The market wide circuit breakers would be triggered by movement of either BSE SENSEX or the NSE S&P CNX Nifty whichever is breached earlier.

- In case of a 10% movement of either of these indices, there would be a 1-hour market halt if the movement takes place before 1 p.m. In case the movement takes place at or after 1 p.m. but before 2.30 p.m. there will be a trading halt for ½ hour. In case the movement takes place at or after 2.30 p.m. there will be no trading halt at the 10% level and the market will continue trading.
- In case of a 15% movement of either index, there will be a 2-hour market halt if the movement takes place before 1 p.m. If the 15% trigger is reached on or after 1 p.m. but before 2 p.m., there will be a 1 hour halt. If the 15% trigger is reached on or after 2 p.m. the trading will halt for the remainder of the day.
- In case of a 20% movement of the index, the trading will be halted for the remainder of the day.

These percentages will be translated into absolute points of index variations on a quarterly basis and at the end of each quarter these absolute points of index variations would be revised and made applicable for the next quarter.

The absolute points of SENSEX variation (over the previous day's closing SENSEX) which would trigger market wide circuit breaker for any day in the quarter between 2nd July 2001 and 28th September 2001 would be as under:

Percentage (+/-)	Equivalent Points (+/-)
10%	350
15%	525
20%	700

Source: http://www.bseindia.com/whtsnew/circuit.asp

Appendix F

Proposed Concentration Margins for Ready and Derivatives

Concentration Margins

Concentration Margins are regarded as the preliminary speed breakers in consideration of applicable position limits. Concentration means a risk due to concentration of positions across and within a counter; it is calculated from the value of damage that may arise in the case a participant is unable to fully close out such open positions across and within counter. Position limits are the value boundaries which are not allowed by the automated systems to be crossed or violated under any circumstances whatsoever.

This paper suggests the mechanics for incorporation of concentration margin on derivative products, and Cash counter. Given below are the broad parameters which may be kept in mind while taking into considerations, the proposed measures.

Open Interest

"Open interest" means, "the total value of Contracts of a Broker or his clients that have not been offset and closed at any point in time by an opposite transaction. For the purpose of calculating the open interest limits the cumulative open interest in all the Contracts would be taken into account. For the purpose of determining Market wide total Open Interest, sum of either all net buy positions or all net sale positions on UIN basis shall be considered. For the purpose of determining broker-level and client level open interest, no netting shall be allowed across offsetting position with different expiry date, for calculation of Position Limits.

Practices in Other Jurisdictions:

Thailand

A concentration margin shall be called when a risk arises due to the concentration of derivatives positions, and shall be calculated from the value of damage that may arise in the case that the member is unable to fully close out such derivatives positions within 1 business day.

India

Concentration Margin is levied to prevent the trader showing interest on a few stocks to manipulate their prices. Margin is computed on a graded basis, if 70 per cent of trader's total turn over in the previous quarter is derived from three or fewer stocks. Such Brokers have to deposit daily margin and concentration margin on the amount of transaction undertaken in the stock exchange.

This constitutes the margin obligation required to be fulfilled by a member in relation to its outstanding exposure to a security or to a group of securities, for a settlement date or for a number of settlement dates, beyond pre-determined limit(s).The Clearing Corporation of India Ltd. (CCIL) has not yet set any such limits. Clearing Corporation shall cover its risk through prescription of initial margin, mark to market margin, volatility margin and Concentration margin Concentration margin constitutes the margin obligation required to be fulfilled by a member in relation to its outstanding exposure to a security or to a group of securities, for a settlement date or for a number of settlement dates, beyond pre-determined limit(s). Clearing Corporation shall stipulate such margin from any future date after due notification to its members.

In June 1998, the market had witnessed abnormal price fluctuation and volatility. With a view to containing excessive market volatility, certain risk containment measures were taken by the SEBI in consultation with the Inter-Exchange Co-ordination Group and the stock exchanges. The stock exchanges were also directed to ensure all net outstanding sales portion as at the end of the trading day commencing from June 17, 1998 would result in deliveries. As the measure was a temporary one, this decision was reviewed on July 06, 1998 and withdrawn. Other measures included introduction of concentration margin and incremental margin on carry forward trades.

Hong Kong

To minimize the risk arising from the over-concentration of open positions of one Participant, SEOCH has the authority to impose additional margins on individual Participants. In the Stock Options Market, if a Participant's Total Margin requirement accounts for more than 30% of the market total and the amount are more than HK$ 100 million, SEOCH will increase the margin requirement by 20% on that Participant.

Concentration Margins are measured over one day time interval, the time period needed to close most positions in the event of default. Additional concentration margin applied for participants with high exposure levels relative to capital resources. Coverage of collateral requirements is at least 95% of price changes over a one day period, determined by historical volatility and value at risk models.

Proposed Concentration Margins

CONCENTRATION MARGIN SLABS					
%AGE OF CFS POSITION TO TOTAL CFS POSTION		OR/AND	%AGE OF CFS POSITION TO FREE FLOAT OF SCRIP		Concentration Margins
MARKET-WIDE SECURITY CONCENTRATION SLABS AND RATES					
Greater than	2	"	Greater than	5.00	1.00
Greater than	6	"	Greater than	7.50	2.00
Greater than	8	"	Greater than	10.00	3.00
Greater than	10	"	Greater than	15.00	4.00
Greater than	12	"	Greater than	25.00	5.00
Greater than	14	"	Greater than	35.00	6.00
Greater than	16	"	Greater than	40.00	7.00
MEMBER-WIDE SECURITY CONCENTRATION SLABS AND RATES					
Greater than	5	"	Greater than	1.50	1.00
Greater than	10	"	Greater than	3.00	2.00
Greater than	20	"	Greater than	4.50	3.00
Greater than	30	"	Greater than	6.00	4.00
Greater than	40	"	Greater than	7.50	5.00
Greater than	60	"	Greater than	9.00	6.00
Greater than	70	"	Greater than	10.00	7.00
UIN-WIDE SECURITY CONCENTRATION SLABS AND RATES					
Greater than	1	"	Greater than	1.00	0.50
Greater than	2	"	Greater than	1.50	1.00
Greater than	4	"	Greater than	2.00	1.50
Greater than	8	"	Greater than	2.40	2.00
Greater than	16	"	Greater than	3.00	2.50
Greater than	32	"	Greater than	3.50	3.00
Greater than	64	"	Greater than	4.00	4.00

Attachment: Detailed presentation on Concentration Margins by KSE