

Johannesburg Stock Exchange

Post-trade and Information Services

ITaC Position Paper

Post-trade PP03 - Securities and Foreign Currency Collateral

Version	1.0
Release Date	23 May 2016
Number of Pages	15 (Including Cover Page)

1	DOCUMENT CONTROL	
1.1	Table of Contents	
1	DOCUMENT CONTROL	2
1.1	Table of Contents	2
1.2	Document Information.....	3
1.3	Revision History	3
1.4	References	3
1.5	Contact Details.....	3
1.6	Definitions, Acronyms and Abbreviations	4
2	ACCEPTANCE OF SECURITIES AND FOREIGN CURRENCY COLLATERAL	5
2.1	Executive Summary	5
2.2	Introduction	6
2.3	Current Listed Derivative Landscape	7
2.4	Proposed Securities and Foreign Currency Collateral Principles and Processes – Listed Derivatives	8
2.4.1	Applicable Markets	8
2.4.2	Applicable Margins	8
2.4.3	Admissible Alternative Collateral and Qualifying Members.....	9
2.4.4	Valuation of the collateral	9
2.4.5	Proposed Process.....	10
2.5	Rules, Regulations and Reporting	11
2.6	Conclusion	11
	APPENDIX 1 - CURRENT FOREIGN CURRENCY COLLATERAL PROCESS.....	12
	APPENDIX 2A - PROPOSED FOREIGN CURRENCY COLLATERAL PROCESS.....	13
	APPENDIX 2B – PROPOSED EOD COLLATERAL PROCESSES.....	14
	APPENDIX 2C – PROPOSED INTRADAY COLLATERAL PROCESSES.....	15

1.2 Document Information

Drafted By	Post-trade and Information Services
Status	Initial Published Version
Version	1.0
Release Date	23 May 2016

1.3 Revision History

Date	Version	Description
23 May 2016	1.0	Initial Published Version

1.4 References

Name	Version	Description

1.5 Contact Details

JSE Limited One Exchange Square Gwen Lane, Sandown South Africa Tel: +27 11 520 7000 www.jse.co.za	Post-trade and Information Services ITAC Queries Email: CustomerSupport@jse.co.za
Clearing specifications disclaimer Disclaimer: All rights in this document vests in the JSE Limited ("JSE") and Cinnober Financial Technology AB (publ) ("Cinnober"). Please note that this document contains confidential and sensitive information of the JSE and Cinnober and as such should be treated as strictly confidential and proprietary and with the same degree of care with which you protect your own confidential information of like importance. This document must only be used by you for the purpose for which it is disclosed. Neither this document nor its contents may be disclosed to a third party, nor may it be copied, without the JSE's prior written consent. The JSE endeavours to ensure that the information in this document is correct and complete but do not, whether expressly, tacitly or implicitly, represent, warrant or in any way guarantee the accuracy or completeness of the information. The JSE, its officers and/or employees accept no liability for (or in respect of) any direct, indirect, incidental or consequential loss or damage of any kind or nature, howsoever arising, from the use of, or reliance on, this information.	

1.6 Definitions, Acronyms and Abbreviations

ITaC Integrated Trading and Clearing – a JSE project aimed at implementing an integrated Trading and Clearing solution across all of its markets i.e. Equity, Bonds and Derivatives

2 ACCEPTANCE OF SECURITIES AND FOREIGN CURRENCY COLLATERAL

2.1 Executive Summary

Currently JSE Clear, the Central Clearing Counterparty (CCP) for listed derivatives in the South African market, collects ZAR cash collateral against derivative exposures. Over recent years there has been a steady growth in demand from the market for the acceptance of securities and foreign currency collateral. Post the 2008 financial crisis and the tightening of risk and regulatory frameworks and policies such as Basel III, CPMI IOSCO and EMIR, the demand for efficient asset utilisation has increased. The ability to post securities and foreign currency collateral is expected to provide clients with some relief in the face of increasing capital requirements and free up ZAR cash.

JSE Clear calls for Initial Margin (IM), Variation Margin (VM) and Default Fund contributions from its clients as part of its risk management processes. These margins and contributions are currently payable in ZAR-cash only. The acceptance of alternate collateral forms will allow members to meet IM calls through a combination of ZAR-cash, selected securities and in the case of non-resident clients, selected foreign currency cash collateral. Support in principle for the acceptance of foreign currency cash collateral for non-resident clients has been obtained from the regulator however it is subject to formal approval from the South African Reserve Bank and National Treasury. VM will continue to be payable in ZAR cash. The option for Clearing Members to fulfil default fund contributions using alternative collateral has yet to be finalised and will be communicated in due course.

Two technology initiatives are underway to enable the acceptance of non-ZAR cash collateral. The first is an interim collateral solution planned to be delivered prior to ITaC Project 1 go-live that will facilitate the acceptance of securities collateral for the recently introduced large exposure margin add-on only. The second is the ITaC solution which will provide the systems and processing capability for the acceptance of securities and foreign currency collateral against the whole IM obligation i.e. not just the large exposure add-on portion of IM (note a minimum cash percentage will be applicable).

In addition to the technology and process capabilities that need to be enabled, the relevant policies, rules and legislation will need to support the acceptance of securities and FX collateral. The JSE in consultation with stakeholders is in the process of reviewing and addressing these aspects. A key focus of this and a requirement that needs to be satisfactorily addressed before JSE Clear can start accepting securities collateral is the ability to timeously liquidate assets in the event of a participant default and insolvency. Stakeholders will be kept informed as to the progress and expected timelines in this regard.

In order to adequately manage the risk of the CCP and safeguard the market, JSE Clear will set and manage various criteria relating to the acceptance of alternate collateral forms such as a minimum percentage of collateral that must be in the form of cash to meet liquidity needs in the event of a default, eligibility criteria determining the list of admissible securities and foreign currencies and valuation haircuts. The pledge is the proposed mechanism to be used for securities collateral.

In terms of systems and processes, the new JSE clearing system to be delivered in ITaC will integrate to the Strate collateral management system for the management of securities collateral. Processes will cater for the posting of securities collateral against initial margin calls at end of day. Non-resident clients will also be able to submit foreign currency cash,

through their Trading and Clearing members, as collateral against end of day margin calls. The solution will also cater for flexibility required by market participants to manage the mix of the collateral posted against JSE Clear exposures during the course of the day, by for example substituting securities for cash, cash for securities or one security for another.

2.2 Introduction

JSE Clear is the central counterparty (CCP) for JSE operated derivative markets. To mitigate the risk of Trading Members and Clearing Members defaulting, JSE Clear collects Initial Margin (IM) and Default Fund contributions from Clearing Members to cover any potential losses arising from a default.

To date, JSE Clear has only accepted ZAR cash for these obligations, while all major global CCPs accept IM and Default Fund contributions from their Clearing Members in the form of securities and foreign currency collateral. The need for JSE Clear to consider alternative collateral options to fund IM calls and Default Fund contributions has been raised in various forums across the JSE derivatives markets for a number of years. The call for the ability to post alternative collateral, in the form of securities or foreign currency collateral has intensified in the recent past.

The benefits of accepting alternative collateral include:

- Allowing effective utilisation of assets and for clients to have the benefit of freeing up their ZAR cash holdings for other capital requirements or investment needs
- Aligning South Africa with global markets where all major CCPs allow for the posting of securities and foreign currency collateral against IM and Default Fund contributions

As part of its Integrated Trading and Clearing (ITaC) initiative, the JSE is in the process of technologically enabling the acceptance of securities, held with the local CSD (Strate), and foreign currency as IM collateral. The JSE interim collateral solution, prior to the go-live ITaC, is aimed at facilitating the acceptance of securities collateral against the Large Exposure Add-on portion of IM.

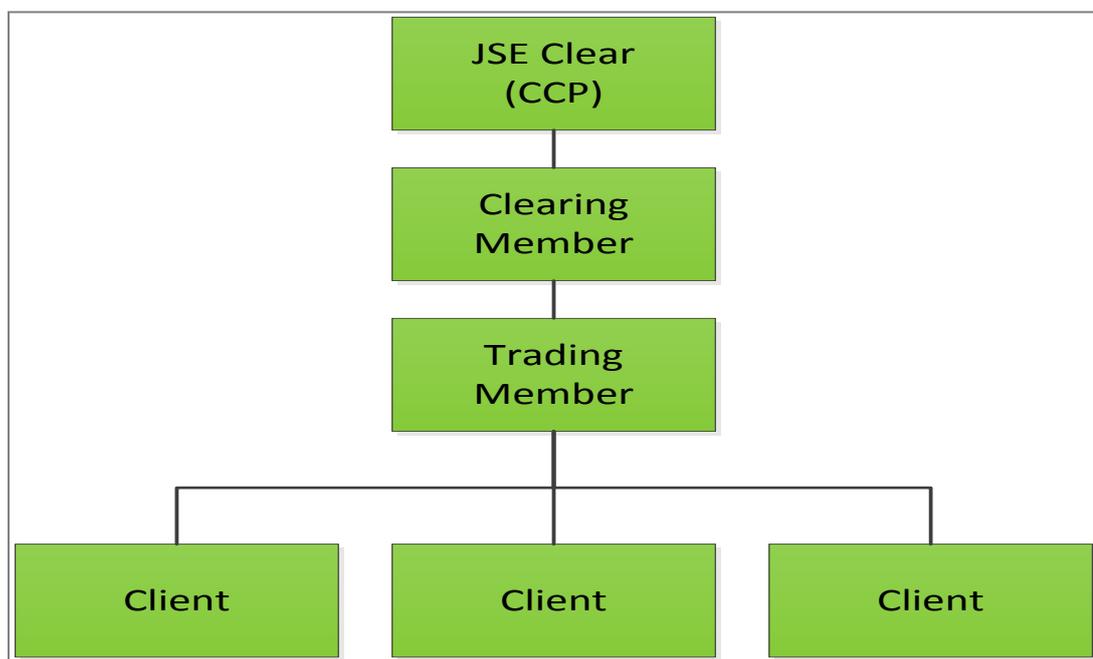
The JSE, in consultation with key stakeholders, is currently reviewing the policies, rules and legislation in support of accepting securities and FX collateral for both the interim and future ITaC collateral solutions.

This paper outlines the conceptual framework and process for the acceptance of non-ZAR cash collateral against exposures in the derivatives markets operated by the JSE and cleared by JSE Clear. It is intended to inform market participants of the JSE position in this regard, based on market engagement as the JSE moves toward an integrated clearing environment. Proposals relating specifically to the acceptance of foreign currency collateral will be subject to South African Reserve Bank and National Treasury approval.

The consideration of acceptance of alternative collateral for settlement margin in the cash equity market space is out of scope of this document and will be covered in due course.

2.3 Current Listed Derivative Landscape

JSE Clear novates transactions, by becoming the counterparty to the seller and the counterparty to the buyer, and acts as the central counterparty (CCP) in the various listed derivative markets (Equity Derivatives, Currency Derivatives, Interest Rate Derivatives and Commodity Derivatives) operated by the JSE. JSE Clear interfaces with Clearing Members who clear transactions for themselves (Direct Clearing Member) or for other Trading Members and for the clients of Trading Members (General Clearing Members) i.e. the end investors. At a high level this structure can be illustrated as follows:



All transactions are recorded at account level, i.e. Trading Member level (where they have house positions) and client level where positions are held. All collateral is held at the Trading Member and client level as well and is held in the name of the Trading Member or client i.e. neither the Clearing Member nor JSE Clear owns the collateral and it can only be used in the case of default. At the end of the day JSE Clear sums up these transactions to determine closing positions, which are then used to calculate the applicable margins for each account. Margins calculated include:

1. **Initial Margin (IM)** - collected by the CCP to mitigate losses in the case of default. This margin is returned to the Trading member or client on closeout of their position. IM collected by the CCP includes Settlement Margin for contracts that are physically settled where the IM is held for 5 business days after Futures Close Out.
2. **Variation Margin (VM)** - refers to the cash movements relating to daily profits and losses on positions held. The positions are marked-to-market/marked-to-model each day to calculate the daily profit and loss, which must be settled by midday on the following day. Variation margin is (and will continue to be) payable in cash based on the trading currency and is not held by JSE Clear (due to the net zero sum game, JSE Clear effectively just facilitates payment between daily winners and losers).

3. **Additional Margin (AM)** – this margin requirement is requested or called by the Clearing Member or Trading Member who may request additional margin from clients should they see the need to do so and as with IM, this margin is returned once the positions which attracted the additional margin have been closed out. This margin may be held by the Clearing Member or Trading member or JSE Clear (where requested).
4. **Add-on Margin** – this margin forms part of IM and includes the liquidation period and the large exposure (or large position) add-on's.
5. **Default Fund** – this is a fund created to manage potential defaults the derivatives market.

JSE Clear calculates the above margins per account and per position on all accounts then aggregates all required margin to the Clearing Member level. A daily account summary report is sent to the Clearing Member and the IM, including Add-ons and Variation Margin is reconciled between JSE Clear and the Clearing Member. JSE Clear then calls the applicable amounts from the Clearing Member. The Clearing Member may then request collateral from its Trading Members, who in turn may call from their clients in order to fund the margin call from JSE Clear. This payment is currently accepted only in ZAR cash and payment must be settled by 12h00 on the next business day.¹

2.4 Proposed Securities and Foreign Currency Collateral Principles and Processes – Listed Derivatives

2.4.1 Applicable Markets

The use of alternative collateral is proposed for the derivative markets operated by the JSE and cleared through JSE Clear, namely:

- Equity Derivatives
- Commodity Derivatives
- Currency Derivatives
- Interest Rate Derivatives

The JSE is in the implementation phase of its Integrated Trading and Clearing project (ITaC) and has designed the ability to accept alternative collateral into the new Clearing system. The first phase of this project includes Equity Derivatives and Currency Derivatives, hence it is envisaged that these will be the first markets for which alternative collateral will be accepted using the new system.

2.4.2 Applicable Margins

The JSE proposes that securities collateral be accepted for IM and AM for all local clients and securities and foreign currency collateral be accepted for foreign client's IM and AM obligations (where AM is held by JSE Clear). Payment of VM will remain as cash only, based

¹ See Appendix 1 for a graphical illustration of the current process.

on the trading currency. JSE Clear will set a maximum percentage of the IM/AM requirement which can be met with alternative collateral.

The JSE is also considering the acceptance of alternative collateral for Default Fund contributions from Clearing Members.

2.4.3 Admissible Alternative Collateral and Qualifying Members

In the initial phase of accepting alternative collateral, it is envisioned that only highly liquid securities will be accepted as securities collateral. Other asset classes may be considered in due course subject to meeting the JSE's risk requirements. All derivative market members and clients will be authorised to use the securities collateral facility, providing that the member or clients holds acceptable securities at Strate.

Due to the regulatory impact of foreign currency movement, the JSE has engaged SARB and National Treasury to get their approval for the acceptance of foreign currency collateral and thus principles outlined in this regard will be subject to this regulatory approval.

The JSE intends to accept USD, EUR and GBP as foreign currency collateral from only non-resident clients as a first phase, which may be expanded to other clients subject to the applicable approvals.

Any extensions regarding acceptable collateral or parties to whom this facility is available will be communicated in due course as the JSE will regularly review and publish collateral eligibility criteria.

2.4.4 Valuation of the collateral

The collateral held as IM and AM will only be accessed in the case of a default. To ensure that Clearing Members and JSE Clear are adequately covered, the valuation of non-ZAR collateral will take the following factors into consideration:

- **Impact Cost** – a measure of the degree to which the potential costs of liquidating the collateral may fluctuate
- **Liquidity Risk** – a measure of the degree to which the potential volume of trade in any security may fluctuate
- **Price Volatility** – a measure of the degree to which the price may fluctuate
- **Concentration Risk** – a measure of the risk of the bulk of posted collateral being only one share
- **Spread Risk** – a measure of the degree to which the difference between the bid and offer prices for an equity security may fluctuate

Quantification of the above considerations will result in a risk factor. The value of the collateral lodged should be discounted by this factor (haircut) after the daily valuation to determine the collateral value to be applied against the margin requirement.

2.4.5 Proposed Process²

To facilitate the posting and acceptance of securities and foreign currency collateral a number of additional processes are necessary. These processes and requirements will differ according to collateral type.

In order to utilise foreign currency collateral JSE Clear, Trading Members, Clearing Members and clients will be required to open Customer Foreign Currency (CFC) accounts with an Authorised Dealer. One CFC account per allowed currency will be necessary. Further, JSE Clear systems will be updated to enable the flagging of accounts who wish to utilise foreign currency collateral as well as the particular currencies they wish to use, as per the CFC accounts opened with the Authorised Dealer. The flows for currency collateral will be the same as the flows for the ZAR cash – from client to Trading Member, Trading Member to Clearing Member and Clearing Member to JSE Clear

For the utilisation of securities collateral, JSE Clear, Trading Members, Clearing Members and clients will be required to open Segregated Depository Accounts (SADs) with Strate as the JSE intends to utilise Strate's Clearstream Collateral Management System to manage securities collateral.

JSE Rules and clearing agreements between JSE Clear and the Clearing Members, as well as any agreements between the Clearing Members and their clients, including Trading Members, will also be updated to cater for both securities and foreign currency collateral.

As part of the end-of-day batch processing, JSE Clear will calculate IM, Additional Margin and Variation Margin on the individual accounts, aggregate to Clearing Member level and reconcile the balances with the relevant Clearing Member. Up to this point the current process applies. JSE Clear will then calculate what portion of the total IM balance can be met with alternative collateral and call for the eligible securities collateral, ensuring that securities are posted, if available.

After the posting of securities collateral, the outstanding IM and Additional Margin will be calculated. JSE Clear will then calculate the maximum amount that may be collateralised through foreign currency by considering the non-resident client's exposure (margin obligation). The Clearing Member will be advised of this amount and also of the updated currency valuations and valuation haircuts (risk factors described previously) applicable for the margin call. Clearing Members may then call the outstanding collateral from Trading Members who may in turn call from their clients.

The Clearing Member will advise JSE Clear of how much each of its clients intends to settle through foreign currencies, after which JSE Clear will determine the ZAR cash amounts outstanding for each account and aggregate the currency and ZAR cash amounts up to the Clearing Member level and generate payment instructions.

On T+1 (next day), payments for both foreign currency and ZAR cash collateral will be processed and must be paid by 12h00.

The JSE will not become the owner of either the securities or the foreign currency funds placed as collateral but will hold this collateral on behalf of Trading Members or clients (as is the case for ZAR cash collateral).

² See Appendix 2b for a graphical illustration of the proposed flows and process for the acceptance of securities and foreign currency collateral.

2.5 Rules, Regulations and Reporting

The JSE's Rules and Directives will be amended to cater for securities and foreign currency collateral and ensure protection in terms of the Insolvency Act.

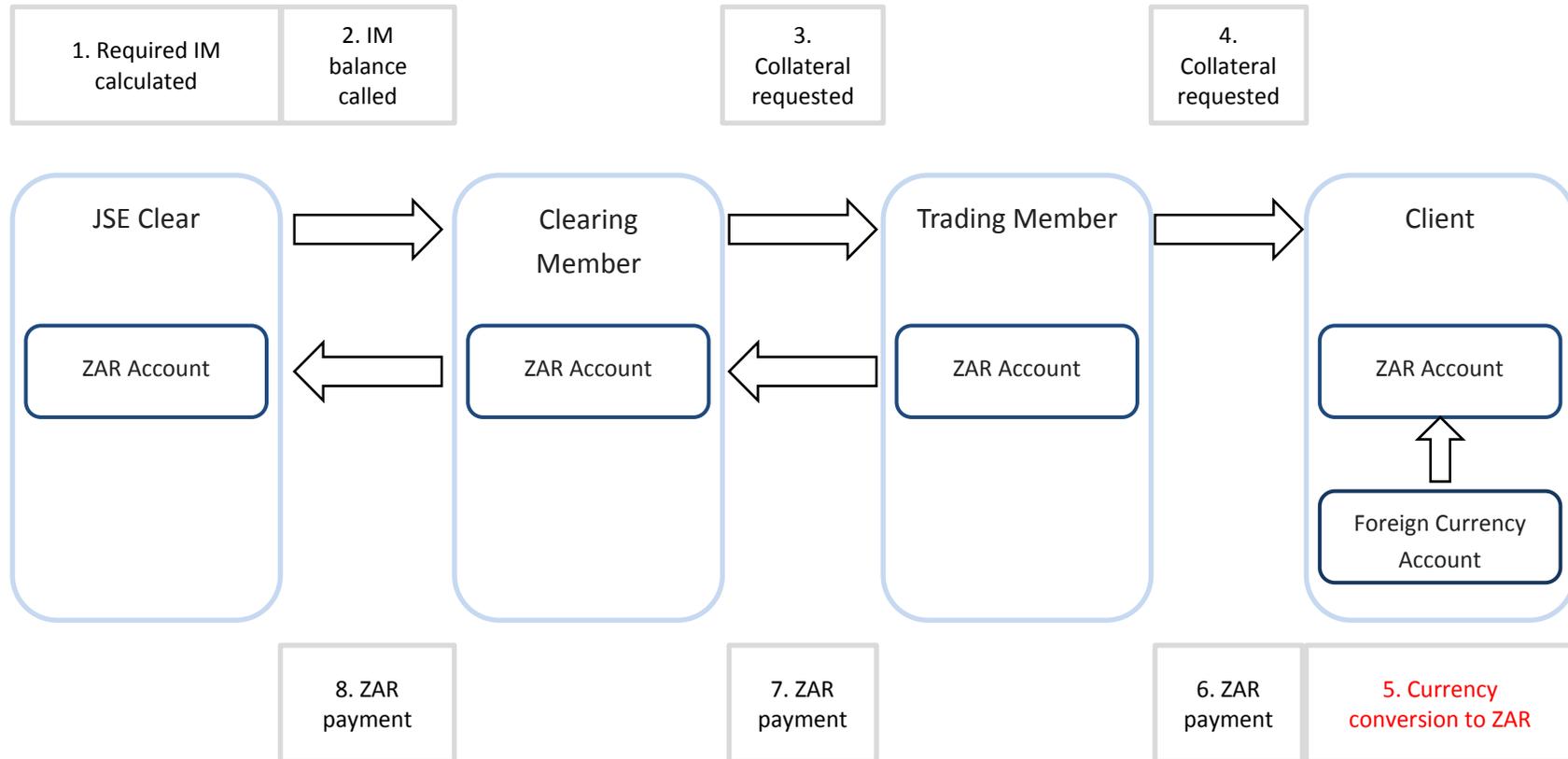
In the event of a client or Trading Member default, any foreign currency collateral held will be converted to ZAR cash, at an exchange rate in line with market rates and released to the Clearing/Trading Member who will use the proceeds in meeting the defaulting party's obligations. Any securities held will be liquidated at the market price and a similar process to the above will be followed. As mentioned earlier in this document, the rules, policies and legislation in support of timeous liquidation of collateral assets is still in assessment and will need to be finalised with key stakeholders. Currently, the provision of the Insolvency Act states that the proceeds of any collateral (whether pledged or ceded in securitatem debiti) have to be paid to the trustee of the insolvent estate. Thus, as a result of needing to claim the assets from the trustee prior to being able to liquidate them, JSE Clear may face potential delays in resolving the defaulting event.

As is currently the case with ZAR cash collateral, JSE Clear will only have access to the securities or foreign currency collateral in the case where a Clearing Member defaults.

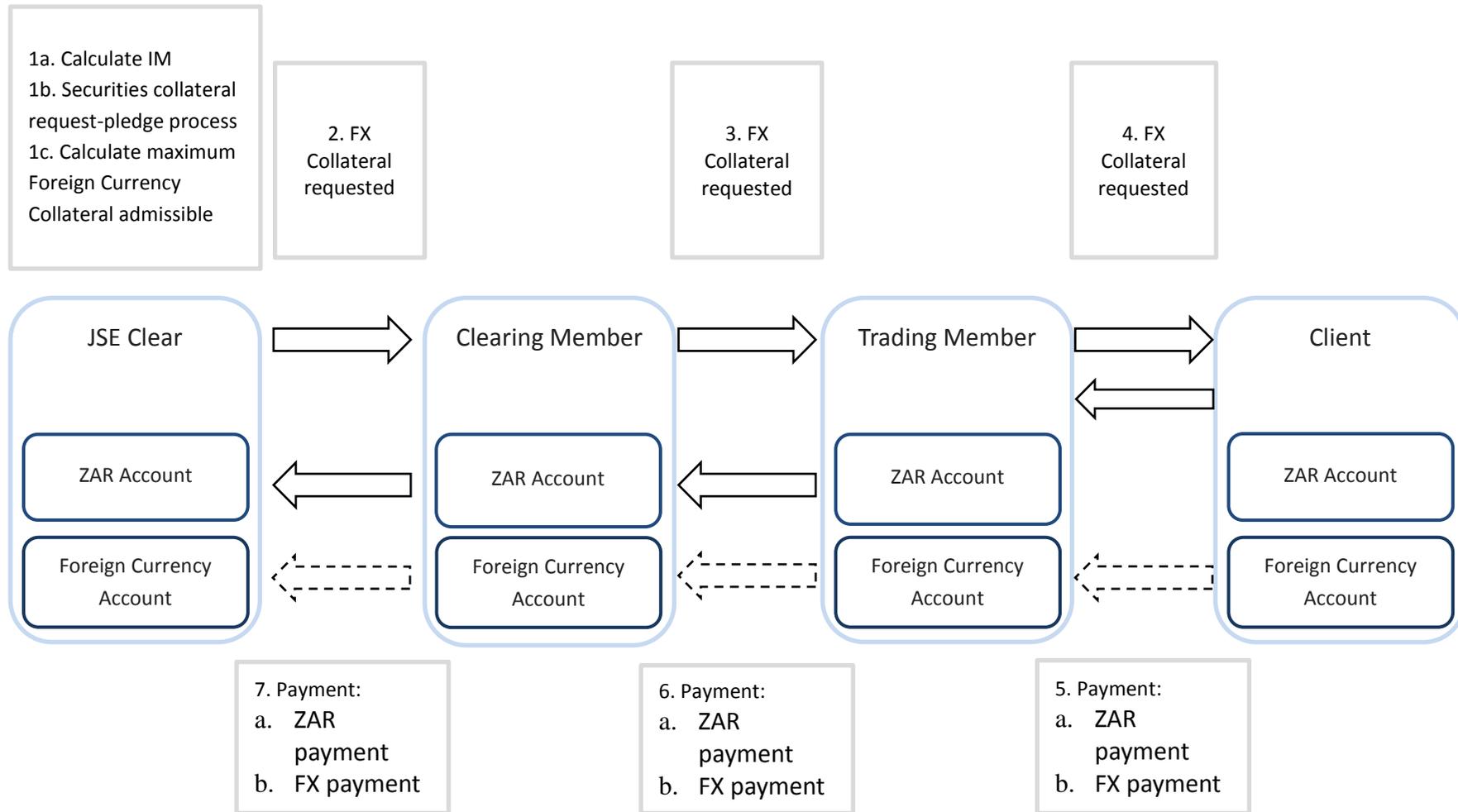
2.6 Conclusion

The ITaC solution will enable the use of non-ZAR cash as collateral against full initial margin obligations (subject to a minimum ZAR cash percentage). Rules, policies and legislation in support of the acceptance of alternate collateral forms are being addressed in consultation with stakeholders and with due consideration of the ability to timeously liquidate assets in the event of a participant default and insolvency.

APPENDIX 1 - CURRENT FORERIGN CURRENCY COLLATERAL PROCESS



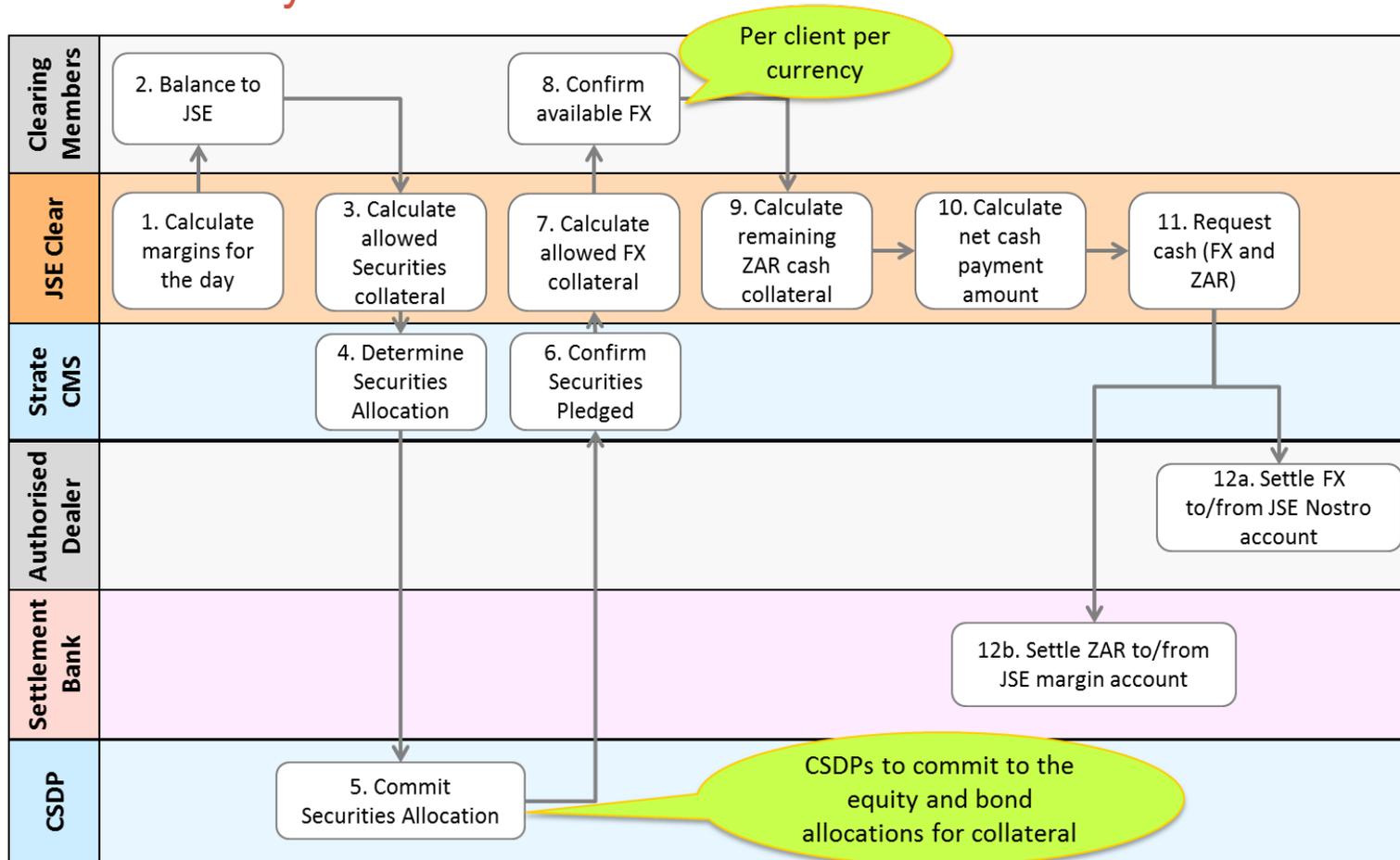
APPENDIX 2A - PROPOSED FOREIGN CURRENCY COLLATERAL PROCESS



APPENDIX 2B – PROPOSED EOD COLLATERAL PROCESSES

Collateral Management

End-of-Day Process



Collateral Management Intra-Day Process

