Discussion Paper

Discussion paper

Proposed valuation requirements for resolution-planning purposes

General disclaimer:

The content of this discussion paper is based on relevant legislation together with published versions of relevant draft legislation, legislative amendments or Bills. It may be amended or updated accordingly as and when relevant legislation is issued or amended.

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Definitions

‘Bail-in’ means a resolution action taken by the South African Reserve Bank (SARB) in terms of sections 166R and 166S of the Financial Sector Laws Amendment Bill, 2018 (FSLAB) that results in losses being assigned to shareholders and creditors of the designated institution in resolution.

‘Banks Act’ means the Banks Act 94 of 1990.

‘Capital adequacy’ ratio means the capital adequacy ratio as set out in the regulations issued in terms of the Banks Act.

‘Core business line’ means those business lines that the SARB would seek to protect through the implementation of resolution options to ensure the sustainability of the designated institution after the implementation of one or more resolution options.

‘Critical functions’ means a critical function as defined in the FSLAB.

‘Designated institution’ means a designated institution as defined in the FSLAB.

‘Disposal value’ means the value applicable to an asset should the intention be to retain the asset.

‘Flac instruments’ means flac instruments as defined in the FSLAB.

‘Financial sector regulators’ means financial sector regulators as defined by the Financial Sector Regulation Act 9 of 2017.

‘FSR Act’ means the Financial Sector Regulation Act 9 of 2017, and includes the regulations and regulatory instruments made in terms of that Act.

‘Holding company’ means a holding company as defined in the Companies Act 71 of 2008 (Companies Act).

'Hold value’ means the value applicable to an asset should the intention be to sell the asset.

‘Insolvency Act’ means the Insolvency Act 24 of 1936.

‘Market infrastructure’ means a market infrastructure as defined in the FSR Act.

‘Point-of-resolution’ means the point at which the Minister of Finance makes a determination to place a designated institution in resolution as provided for in the FSLAB.

‘Regulated financial institution’ means an institution that is regulated and supervised by a financial sector regulator.

‘SARB’ means the South African Reserve Bank as referred to in section 223 of the Constitution, read with the South African Reserve Bank Act 90 of 1989, as amended.

‘Resolution authority’ means the SARB as designated by the FSLAB.

‘Resolution entity’ means an entity in a resolution group as set out in the discussion document on resolution group reporting requirements.

‘Resolution group’ means all entities in a financial conglomerate or financial group of which a bank or systemically important financial institution (SIFI) forms part, and which had not been excluded by the SARB Governor in terms of clause 45 of the FSLAB (or section 29A of the amended FSR Act).

‘Systemically important financial institution’ means a financial institution that has been designated as a SIFI in terms of section 29 of the FSR Act.

Abbreviations

DI	designated institution
FSB	Financial Stability Board
FSLAB	Financial Sector Laws Amendment Bill, 2018
FSR Act	Financial Sector Regulation Act 9 of 2017
NAV	net asset value
NCWOL	no creditor worse off than in liquidation
RA	resolution authority
SARB	South African Reserve Bank
SIFI	systemically important financial institution

1. Executive summary

The South African Reserve Bank's (SARB) resolution framework is set out in the Financial Sector Laws Amendment Bill, 2018 (FSLAB). Once the FLSAB is promulgated, it will form part of the Financial Sector Regulation Act 9 of 2017 (FSR Act).

As part of the process to establish South Africa's resolution framework, a range of discussion papers have been and will be published to obtain public and specifically industry comment. The purpose in obtaining public comment is to develop and implement a resolution framework that meets international standards and best practices but is suited to the South African financial sector.

This discussion paper expands on section 3.9 of the paper published by the SARB in July 2019, 'Ending too big to fail: South Africa's intended approach to bank resolution' (2019 discussion paper).

The FSLAB requires certain valuations to be done by an independent valuator to inform the SARB of the assets that would be realised, or the amount that, in the valuator's opinion, would be the amount payable on the liability, in a winding up of the designated institution. The resolution authority (RA) also requires designated institutions (DIs) to provide it with valuation results so that it can adequately perform its role of protecting and enhancing financial stability by developing resolution plans.

Valuation will be a key part of the resolution process, as it will help with developing the DI's resolution plan, identifying the resolution trigger and implementing the appropriate resolution option.

This paper sets out proposed requirements on resolution valuations for DIs, the independent valuator and the RA.

DIs will be responsible for providing the valuator and/or the RA with the required information and for having the necessary valuation model capabilities to enable the DI, valuator and RA to fulfil its responsibilities.

Table 1 provides a high-level summary of valuation requirements and the responsibilities of relevant parties.

Table 1: Valuation requirements and responsibilities

Requirement	Designated institution	Independent valuator	Resolution authority
Data required for valuation purposes	✓		
Valuation assumptions: - prior to entry into resolution	✓		
- post entry into resolution	✓	✓	
Determining the valuation date			✓
Valuation model requirements:			
- Valuation at a granular level	✓	✓	
- Provide valuation within an adequate timeframe	✓	✓	
- Meet host regulatory requirements	✓	✓	
- Forecasting capabilities	✓	✓	
- Determine risk-weighted assets for recapitalisation needs	✓	✓	
- Ability to amend assumptions	✓	✓	
- Incorporation of expert judgement	✓	✓	
- Incorporation of additional or reduced operational costs	✓	✓	
(Template setting out applicable operational cost)	✓		
- Consideration of contingent assets and liabilities	✓	✓	
(A record setting out all contingent assets and liabilities)	✓		
- Identification of value ranges	✓	✓	
- Incorporation of valuation buffers - Determine liquidation value		✓ ✓	
<u>Note</u>: *For this section, the valuation responsibility will be with the DI pre-resolution. In- and post-resolution, the valuation results are the responsibility of the valuator. However, the DI should provide the valuator with all required information as well as access to its valuation model and experts.*			
Valuation usages:			
Develop resolution plans	✓		✓
Determine resolution trigger			✓
Determine the resolution action		✓	✓
No creditor worse off than in liquidation (NCWOL) safeguard		✓	✓
Capital requirement to exit resolution			✓
<u>Note</u>: *The DI will provide valuation results to assist in each of the above usages. The guidelines as set out in the discussion document titled 'Proposed principles and requirements for Flac instruments' will be used to help determine the required capital requirement. It is important to note that the Prudential Authority (PA) is ultimately responsible for assessing and approving the capital requirement.*			
Identification of possible valuators			✓
Drafting of valuation report		✓	

2. Introduction

In the resolution of a bank, the value of its assets and liabilities can have a significant impact on the resolution approach. The absence of an appropriate valuation reduces the resolution authority's ability to conduct an orderly resolution. It is therefore critical that the assets and liabilities are appropriately valued for resolution purposes.

A valuation will inform various decisions, such as whether to trigger resolution and the selection and execution of the appropriate resolution option to limit the impact on financial stability. A valuation at the end of the resolution process will also be required to determine whether the resolution complied with the no creditor worse off than in liquidation (NCWOL) safeguard.

Unreliable and delayed valuations can result in an ineffective or disorderly resolution, which would result in the selection of an inappropriate resolution action or a delay in the execution of a resolution action, which may lead to unnecessary losses and financial instability.

The FSLAB requires the SARB, as RA, to obtain two types of valuations:

i. an independent valuation before taking a resolution action; and
ii. an independent valuation after resolution to ensure that the resolution complied with the NCWOL safeguard.

DIs should have the necessary valuation capabilities in place to ensure that the SARB can obtain these valuations. A DI must be able to perform the appropriate valuations and provide the independent valuator with the required information to conduct an independent valuation.

A DI should be able to provide the SARB with the necessary information to exercise its responsibilities as an RA. These responsibilities include:

i. developing resolution plans and identifying adequate resolution strategies for each DI based on, among others, a reliable valuation of the DI's balance sheet in both business-as-usual and stressed times;

ii. determining whether the DI must be placed in resolution based on a valuation of its balance sheet by the DI’s management information system using the criteria and assumptions applicable at the time and aligned to the conditions set out in this discussion document; and

iii. determining the post-resolution capital requirements for DIs where bail-in was applied by using a post-resolution valuation to calculate the DI’s risk-weighted assets and the available qualifying capital.

When an independent valuation is required, the DI must be able to provide the independent valuator with its valuation results, including the assumptions and criteria used.

The SARB has considered the Financial Stability Board’s (FSB) guidance to identify appropriate valuation criteria and capabilities that DIs should have. The SARB has also considered the adoption of the FSB guidance by other jurisdictions, including the Bank of England, UK Prudential Regulatory Authority, the European Banking Authority and the European Single Resolution Board.

This document sets out the requirements to facilitate valuations needed for resolution planning and execution purposes.

3. Scope

The requirements set out in this paper apply to all DIs, as defined in clause 45 of the FSLAB, to be inserted as section 29A in the FSR Act.

4. Objective

The overarching objective of this discussion paper is to set requirements to ensure that all DIs can:

i. provide the SARB with good quality and timely valuations to fulfil its duties as the RA; and

ii. provide, in a timely manner, the independent valuator with the required information to perform a quality valuation.

To comply with these requirements, a DI must demonstrate to the RA that its valuation capabilities meet the following criteria:

Timeliness requirement:

i. When required, the DI's must be able to initiate a valuation before being placed in resolution.
ii. For a closed resolution strategy, the DI's must be able to perform a valuation within three days to avoid a further deterioration of value.
iii. For an open resolution strategy, the DI's must carry the valuation out within three to six months.
iv. For non-resolution entities[1] within a designated SIFI group subject to an open resolution strategy, the DI's must complete the valuation within seven days of being placed in resolution to assist with the liquidation or purchase and assumption of these entities.

Quality requirement:

i. The valuation must be of high quality to assist the RA in choosing the appropriate resolution action for the specific circumstances.
ii. To the greatest possible extent, the result of the valuation should not be significantly different, in such a way that an alternative resolution action would have been taken, should more time have been available to execute the valuation.

5. Valuation date

Valuations can take place before or after the Minister of Finance has placed the DI in resolution. The valuation date shall be either of the following:

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[1] A resolution entity is an entity in a financial group that the SARB has identified as necessary to put in resolution. Resolution entities will include designated SIFIs that perform critical functions. A non-resolution entity is an entity within a group that has not been identified as a resolution entity.

i. Where the valuation was performed prior to the entry into resolution, the date at which the valuator performed the valuation, which should be as close as possible to the date that the Minister makes a determination to place the DI in resolution.
ii. Where the valuation is performed after the DI was placed in resolution the valuation date will be the day on which the DI was placed in resolution.

6. Data requirements and sources of information

The success of a valuation depends on the availability and integrity of data. DIs should ensure that their information is complete, accurate and readily available to the RA and the independent valuator.

6.1 Data requirements

DIs should improve the integrity and timely availability of data by ensuring that:

i. data is access controlled;
ii. data is subject to regular reconciliation and testing;
iii. data is up to date, taking into account the speed at which information can change in a resolution scenario;
iv. data is in a format suitable for immediate utilisation (further clarity will be provided in a future discussion document dealing with reporting requirements); and
v. data that originates from various sources is cross-referenced and reconciled (this includes netting arrangements, multiple exposures to a single counterparty – or group of counterparties – and any collateral in place).

6.2 Sources of information

The valuation should be based on any information available and deemed relevant by the DI, the independent valuator and the RA. This information may include, but is not limited to:

i. financial statements;
ii. audit reports;
iii. regulatory reporting;
iv. relevant market data;
v. conclusions made by the independent valuator after discussions with management, the auditors and the DI's valuation experts;
vi. stress-testing results;
vii. simulation exercise results; and
viii. historical information, adjusted to exclude irrelevant factors and include newly available factors.

6.3 Stock-take of assets and liabilities

A DI should keep a detailed record of all its applicable assets and claims. The management information system should be able to generate such a record and indicate:

i. all the identifiable and contingent assets owned by the identified resolution entity;
ii. expected cash flows from the assets under (i);
iii. all the claims and contingent claims against the identified resolution entity;
iv. the rankings of the claims mentioned under (iii) if regular insolvency proceedings were followed; and
v. all encumbered assets and the claims secured by those assets.

7. Valuation assumptions

Since the valuation results will be used for resolution purposes, the assumptions used by the DI should be modelled for severe and/or continuous stress scenarios.

The assumptions should be realistic and up to date with the latest economic trends. They should be reviewed at least annually, or when there has been a significant change in economic conditions.

DIs must have adequate governance processes in place for the approval of valuation assumptions. The appropriate senior management must approve material assumptions.

Valuation assumptions should, as far as possible, consider appropriate resolution actions, such as restructuring, in which case an accurate estimate of the equity value across the group and within the different business lines will be required, especially if the resolution strategy is to divest certain parts of or an entire business.

The DI’s valuation capability should allow for inputs to be amended on a timely basis, based on the opinion of the RA and/or independent valuator. The DI should give the independent valuator access to sources of information and expert staff members to clarify uncertainties and amend inputs without delay.

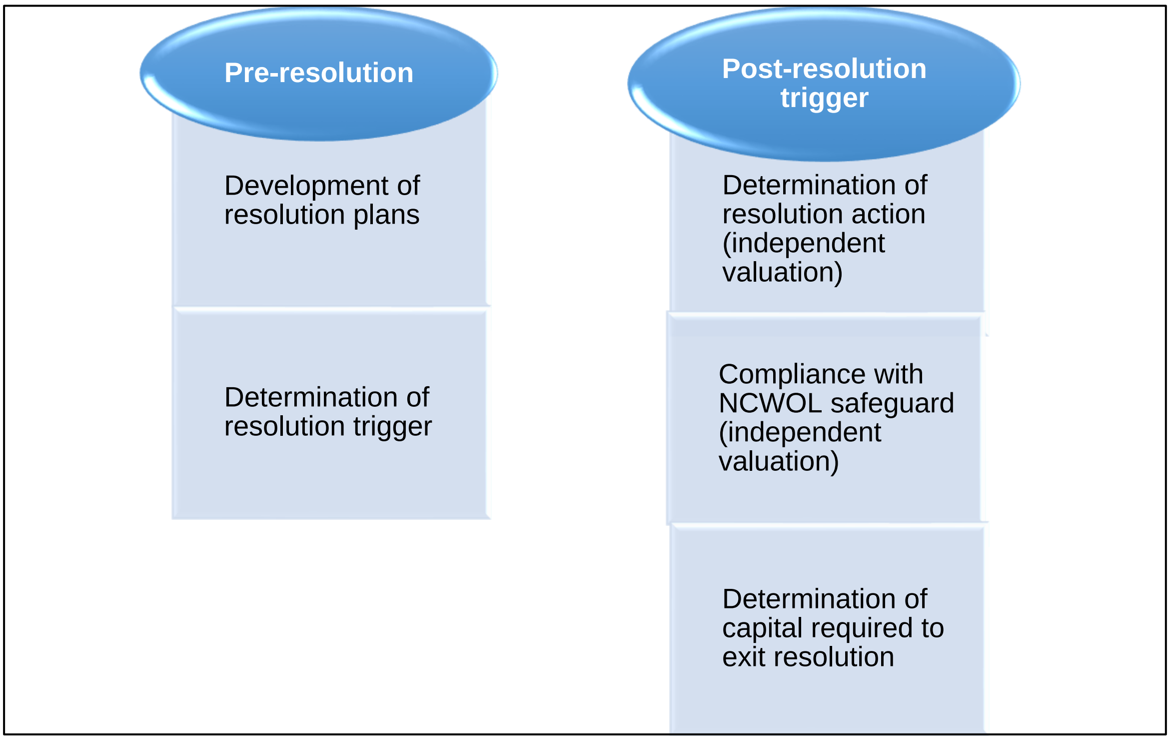
Resolution entities should apply the valuation assumptions consistently across the group and business lines to ensure a consistent understanding of the assumptions used and expedite finalisation of the valuations.

8. Valuation usages

As previously mentioned, valuations can take place before or after the Minister has placed the DI in resolution. Regardless of the timing of the valuation, the DI must provide all relevant data, assumptions and valuation results on a timely basis.

Figure 1 sets out the pre- and post-resolution valuation usages, which are discussed in detail below.

Figure 1: Pre- and post-resolution valuation usages



8.1 Development of resolution plans (pre-resolution requirement)

The RA will require reliable and updated data from the DI to prepare resolution plans. As part of this step, the DI must apply reasonable assumptions to accounting and regulatory information to estimate the expected cash flows based on its current financial position, possible future circumstances and stress scenarios. The RA may use its judgement to instruct the DI to deviate from management's assumptions.

8.2 Determination of the resolution trigger (pre-resolution requirement)

A DI will be placed in resolution when the RA believes that it is unable, or would likely be unable, to meet its obligations. The pre-resolution valuation assists the RA determine the point of resolution for the DI. In determining whether the DI is likely to meet its future obligations, the RA will consider the DI's:

i. prudential requirements;
ii. balance sheet solvency;
iii. profitability;

iv. possible liquidity constraints; and

v. failure to settle its obligations in any financial market infrastructure (for example SAMOS)

The pre-resolution valuation will help the RA decide whether to trigger resolution, but the lack of this valuation does not prevent a resolution from being triggered.

8.3 Determination of appropriate resolution action(s) (in resolution requirement)

An independent valuation is required before the RA takes a resolution action. The DI can use the valuation done under section 9 in the discussion paper and update it should additional information be available. The independent valuator will review this valuation, and the DI must promptly make any amendments required by the valuator. The RA may discuss the possible resolution actions with the independent valuator to ensure that they are correctly and adequately considered in the valuation.

8.4 Compliance with the NCWOL safeguard (in resolution requirement)

The purpose of the NCWOL safeguard is to protect the fundamental property rights of shareholders and creditors by ensuring that no shareholder or creditor is worse off than they would have been in liquidation. This valuation will take place after all resolution actions have been executed and will be done on a gone-concern basis.

This valuation will be the responsibility of the independent valuator who needs to calculate the value that each class of shareholder and creditor would have received if regular insolvency proceedings[2] would have been followed when the RA triggered resolution.

[2] Refer to section 8.2 for a discussion regarding the determination of the DI's value under insolvency proceedings.

The DI will have to provide the independent valuator with the relevant information required to perform this valuation: for example, a list of creditors, ranked in accordance with the creditor hierarchy.

8.5 Determination of capital requirement to exit resolution (in resolution requirement)

The need for this valuation depends on the identified resolution strategy, i.e. an open vs closed resolution strategy[3]. The RA is responsible for advising the DI whether an open or closed resolution strategy will be followed. If an open resolution strategy is followed, steps should be taken to ensure that the DI is appropriately recapitalised. The RA, together with the Prudential Authority and/or the National Payment System Department (specifically in the case of a significantly important payment system that is not owned or operated by the SARB), will determine the amount of capital required on a case-by-case basis. See also the SARB's discussion document on the ''Proposed principles and requirements for Flac instruments''[4] discussion paper requirements for additional information on post-resolution capital requirements.

Should the RA advise the DI that an open resolution strategy will be followed, the DI's valuation model must have the capability to assist in determining the relevant capital requirement.

Factors that will influence the recapitalisation amount include:

i. the total capital adequacy ratio before the DI entered resolution;
ii. the newly structured resolution group[5];
iii. the risk-weighted assets of the resolution group after the completion of the resolution actions;
iv. the capital percentage required for market confidence and the self-sustainability of the DI; and

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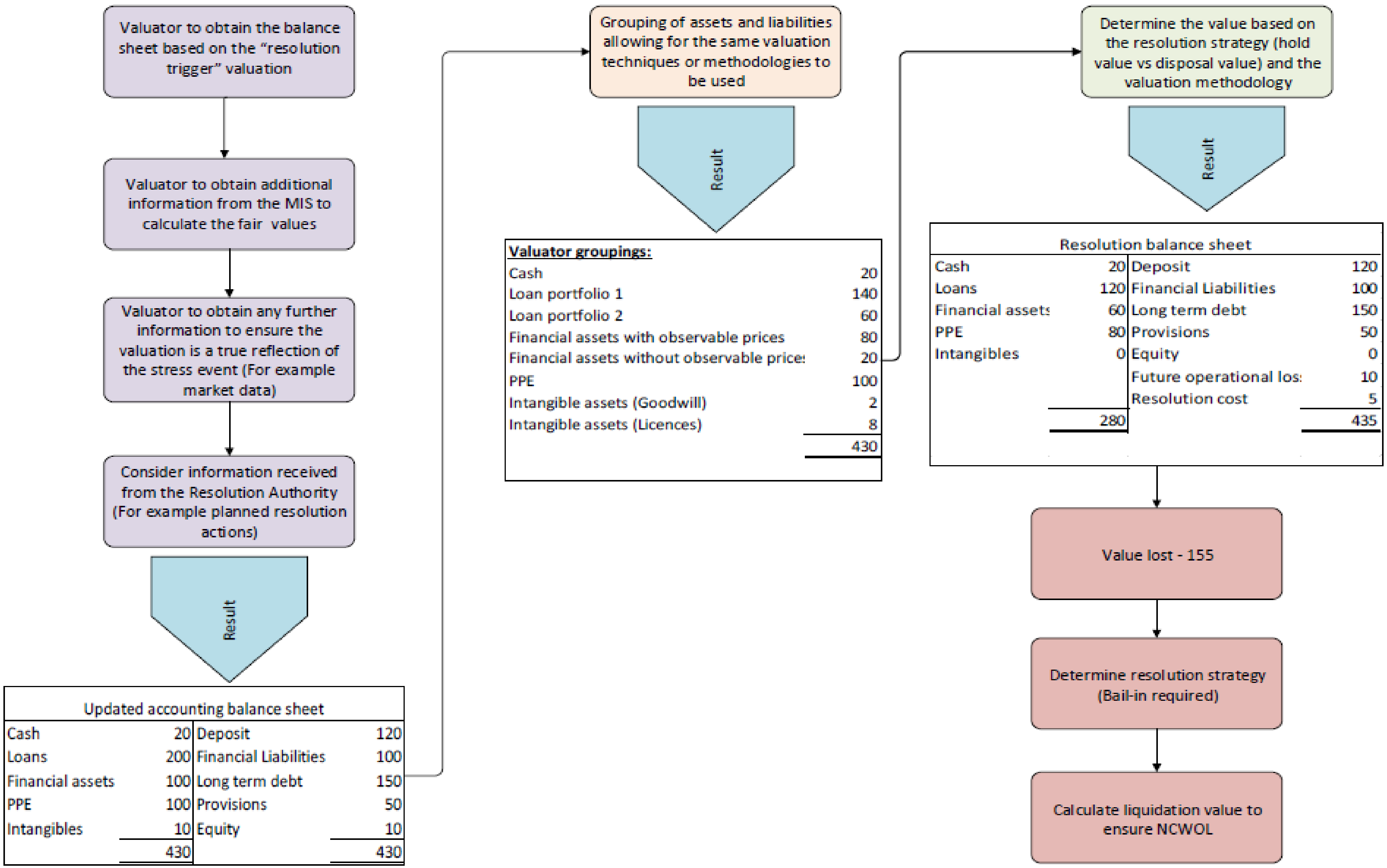
[3] Refer to section 8.2 for a discussion regarding the determination of the DI's value under insolvency proceedings.
[4] Refer to the Proposed requirements and principle for Flac instruments discussion paper.
[5] Refer to the group structure document published by the SARB in October 2020.

v. the capital requirement of the DI’s peer group.

Based on the above valuation usages, Figure 2 below indicates the process to be followed to determine the resolution strategy and whether the resolution actions complied with the NCWOL safeguard.

Figure 2: Illustrative example of valuation process



8.6 Determining the liquidation value

The independent valuator determines the DI's liquidation value for resolution purposes. The valuation model used should calculate the insolvency values which will be used:

i. to determine whether the value of the DI's projected future cash flows exceed its liquidation value; and
ii. to ensure adherence to the NCWOL safeguard when bail-in is applied.

At a minimum, the independent valuator needs to consider the following in calculating insolvency values:

i. For assets with market prices, the available market price should be used.
ii. The expected cash flows must be discounted at a relevant liquidation rate to determine a liquidation value.
iii. For assets without market prices, the following should be considered, and appropriately adjusted, to determine the amount and timing of the DI's expected cash flows:
    a. prices observed in actively traded markets for similar assets;
    b. prices observed for similar assets in a stressed environment;
    c. the market depth and appetite in a stressed environment; and
    d. the timing for disposal depends on the complexity of the insolvency proceeding, the characteristic of the asset and the market appetite.
iv. Insolvency practices in the relevant jurisdiction.
v. Costs incurred by the liquidator, such as administration, transaction, advertisement and disposal costs.
vi. Available information on similar insolvencies in the past.
vii. The impact of the DI's financial condition on future cash flows.
viii. The cash flows need to reflect the contractual, statutory or other legal rights of creditors, while considering the situation and additional information at hand.

9. Valuation techniques and models

Multiple methodologies and techniques can be used to determine the value for business as usual, due diligence and resolution purposes.

The RA will inform the DI whether an open or closed resolution strategy will apply to it and, in line with the strategy, indicate whether the intention during a resolution will be to keep an asset (hold value) or sell it (disposal value).

The DI's valuation model must be able to value the assets and liabilities in line with the proposed resolution strategy and the RA's intention for specific assets and liabilities as part of the overall resolution strategy.

The RA will work closely with the DI when developing the resolution plan and the RA will make use of an independent valuator for some of the valuation requirements. However, the DI will have to submit its valuation model to the RA for formal approval, to ensure that it meets the necessary requirements.

9.1 Hold value

For an open resolution strategy, the DI's valuation model must be able to determine the hold value using an appropriate valuation method. The hold value is applicable where the intention of the RA is for the DI to keep an asset after the execution of a resolution action. An open resolution strategy does not preclude the sale of specific legal entities, business units or assets, while maintaining the identified critical functions.

The future sustainability of the DI as a going concern will require additional information, including an understanding of its future business strategy, financial forecasts and possible restructuring plans. An adequate and accurate valuation is needed to inform decision making and the DI's valuation model must be able to assist in determining these elements.

The hold value is defined as the present value of the DI's expected future cash flows, discounted appropriately, based on the remaining assets and liabilities. It should consider the economic climate and the potential impact of the DI being placed in resolution.

9.2 Disposal value

The DI's valuation model should be able to calculate the disposal value, especially where a closed resolution is followed, or assets and liabilities are transferred to a third-party purchaser or a bridge institution as part of the RA's chosen resolution action.

The valuation method for determining the disposal value should consider the following:

i. The value that an informed purchaser will be willing to pay for the assets and liabilities, given the prevailing circumstances.
ii. Disposal cost: the costs to make the assets and liabilities saleable.
iii. The difference in the value between a combined sale and a piecemeal sale.
iv. The time required to complete the sale of all assets and liabilities.
v. The effect on the value for a forced sale, or when there is no buyers' interest.
vi. Franchise value: this approach will be followed when the transfer does not include assets and liabilities only but the entire franchise, including any future business opportunities.

> The 'hold value' valuation will likely differ from the valuation where assets are sold to a willing buyer. In some cases, the independent valuator may need to clarify the difference in the valuation with the RA, especially when the disposal of assets seems to be economically more beneficial, but the chosen approach is to keep the asset, or vice versa.

9.3 Valuation models

The DI will have to submit its proposed valuation model to the RA for approval. The RA will, with input from pre-approved independent valuators, assess the DI's submission and either approve or decline the DI's valuation model. The valuation model should be able to perform an individual valuation for all material asset and liability classes[6]. Immaterial assets and liabilities can be grouped, provided that the same valuation technique is used for their valuation. The DI can use any valuation model it deems relevant unless the RA prescribes a particular model.

9.3.1 Valuation model requirements

The DI's valuation model should, at a minimum, be able to do the following:

i. Provide a *quality valuation* of assets, liabilities, portfolios, and business units given the intended resolution action, as per the resolution plan.
ii. Provide the valuation at a *granular level* that meets the quality requirement (refer to section 4).
iii. Provide the valuation in *a period* that meets the timeliness requirement (refer to section 4).
iv. Meet the requirements of relevant *host regulators*, where applicable.
v. Have *forecasting capabilities*, to forecast the DI's balance sheet and cash flow requirements.
vi. Where applicable, estimate its *recapitalisation needs* by calculating the potential future risk-weighted assets.
vii. Enable the independent valuator/RA to *amend the assumptions* and obtain the updated results within a reasonable time.

The supporting information for the valuation results must meet the following:

i. All assumptions must be set out in a board-approved document.

[6] For purposes of this paper, an asset and liability class would be considered material if the incorrect valuation could possibly have a significant impact on the resolution outcome or strategy.

ii. The information supporting the valuation must be available, including credit reviews, payment history, the borrower’s financial condition, set-off arrangements, netting and collateral agreements.

9.4 Accepted valuation methods

This section sets out the different methods used for valuations. Examples of valuations are provided in the annexures.

9.4.1 The discounted cash flow model

Discounted cash flow is a valuation method used to estimate the value of an investment based on its future cash flows. It seeks to estimate the value of an investment today by forecasting its future economic benefits and outflows. The DI must include expert judgements in the valuation model for estimating cash flows, while considering the characteristics of the assets and liabilities being measured. The discounted future cash flow method is suitable for calculating hold or disposal values (as discussed in section 9.1.1 and section 9.1.2).

Table 2 sets out the considerations for using the discounted cash flow method.

Table 2: Discounted cash flow model considerations

Consideration	Description
Type of cash flow	The intended resolution action (i.e. holding the asset or selling the asset) influences cash flows. When the cash flow is calculated, for example, for a loan portfolio, all cash flows relative to the exposure should be included (that is, the interest and principal amount). Other considerations, such as additional costs to be incurred, should also be included in the calculation.
Length of forecast period	The remaining life of the assets must be considered in the cash flow forecasts. When determining the forecast period, the behaviour of clients may be considered on an individual or portfolio level. For example, a borrower's behaviour might change when the DI is subject to bail-in. The client might be a debtor and a creditor (subject to bail-in) and this might alter their behaviour.
Prospective financial information	In addition to contractual repayments, factors such as the cost of risk, administrative and funding cost, and guarantees need to be considered when determining the adjusted cash flow. All aspects that were not considered in the

Consideration	Description
	cash flows but are relevant for the valuation should be reflected in the discount rate.
Terminal value	Terminal value is the value of an asset beyond the forecast period, based on its remaining lifetime. The terminal value can be calculated in two instances: (i) Indefinite lifetime: Applicable when valuing elements such as equity investments or determining franchise value. (ii) Finite lifetime: If an asset has a maturity of nine years and the detailed forecast period is five years, then four years would be considered for the terminal value calculation.
Discount rate considerations	
Timing of the related cash flows	The time over which the forecasted cash flows are discounted must be correctly reflected in the discount rate.
Risk profile	The discount rate should reflect the inherent risk. The disposal value must include the potential purchaser's strength in the market where the asset will be sold and this can be incorporated into the discount rate.
Financing cost	The financing cost depends on assumptions about the future owner of the asset. This could be difficult to determine but can be reflected as the financing cost for an institution which is most probable to assume the asset.
Market conditions	The market conditions should be appropriate for the asset being measured. It may include macroeconomic conditions or considerations influencing the marketability of the asset. It should be kept in mind that even assets that have a liquid market in business-as-usual conditions may not have a liquid market during a stress event.
Disposal strategy	A fast sale will likely have a significant impact on the discount rate. When a specific group is targeted as the potential purchasers of the assets, the discount rate should reflect the considerations these purchasers will use to determine the purchase price.
Entity's financial position	If the assets remain on the entity's balance sheet, the entity's financial position after resolution may have to be considered when determining the discount rate. An example of when this will be applicable is when the conversion rate from debt to equity is determined for the purpose of bail-in.

Two types of approaches can be used to determine a cash-flow--based valuation:

i. Top-down approach:
   - This approach will be followed when time is limited, and a quick valuation is required.

- For this approach, broader portfolio-level assumptions will be applied.
- In certain situations, the value determined using the top-down approach can be too broad for a resolution valuation.

ii. Bottom-up approach:
- This approach will be used when there is more time to complete the valuation and a more exact valuation is required.
- In this approach, individual positions will be analysed based on the specific situation.
- The bottom-up approach can provide a narrower and more reliable value range.

These two approaches are not mutually exclusive. A DI and/or an independent valuator may want to use both in parallel, especially since there may not be enough time to perform the bottom-up approach for all portfolios or asset types. The top-down valuation can be used as a first step to determine the value range and key sensitivities. As a second step, a sample can be selected for which the bottom-up approach can be used to estimate a narrower and more reliable value range.

<u>Specific requirements for the independent valuator using the discounted cash flow model include the following:</u>

i. When the envisaged strategy is for a business to be wound down or assets and liabilities to be sold, the independent valuator must set out a cost-versus-benefit analysis (between keeping and disposing of the assets) by considering factors such as the potential loss of income, operating expenses and tax.

ii. Where judgement can, or was, not adequately considered by the valuation model, the independent valuator must apply appropriate expert judgement.

iii. Where the resolution strategy is to retain specific assets and liabilities, the independent valuator must consider factors that could affect the cash flows, for example, changes in assumptions, changes to the business strategy or updated information.

iv. The independent valuator must consider factors that could affect disposal values and periods, including:
   - Observations made in similar transactions, appropriately adjusted to the current market conditions and business model.
   - The specific advantages and disadvantages for the parties involved.
   - The potential future profit due to, for example, the franchise value attached to the specific asset or business.

v. When an independent valuator believes that the disposal of the assets or business will not result in any value, they need to estimate the potential future cash flow requirements for an orderly run-off.

Refer to Annexure A for an example of the discounted cash flow valuation.

9.4.2 Market value method

The market value approach is used to determine the appropriate value of a business, intangible asset, business ownership interest, or security by considering the market prices of comparable assets or businesses. Price-related indicators like sales, book values and price-to-earnings are normally used to derive a suitable market value.

The market value method can be applied in situations where assets, groups of assets or an entity will be sold as part of the resolution strategy. It can also be used to provide an estimation of the value even when the strategy is to retain the assets.

This method can be used to determine the value of debt and equity securities that are traded on liquid markets. The values of similar traded instruments can be used for valuation purposes but would need to be adjusted to consider specific factors, such as:

i. the size of the investment, including the possible effects of large-scale dumping; and

ii. the discount rate applicable for an accelerated sale.

When making use of the market value method, either of the multiples mentioned below can be used to perform the valuation. A peer group for the DI being valued must be identified to use these methods. Differences in financial positions may result in the need to make adjustments.

i. Trading multiple:

- Daily market prices of publicly traded companies can be used to arrive at valuation multiples.
- Examples of trading multiples include price-to-earnings and earnings before interest, taxes, depreciation and amortisation.
- This calculation can be performed for any historical period (provided that the data is publicly available).
- Possible data sources include Capital IQ and Bloomberg.

ii. Transaction multiple:

- This method uses the announced acquisition price of a transaction to arrive at the valuation multiples.
- This method can only be used at the specific transaction date.
- Transactions may not have disclosed all the information required for a valuation, meaning this method may not always be possible.
- A popular transaction multiple is the enterprise value[7], especially when 100% of the company is being purchased.
- Possible data sources include Capital IQ and Bloomberg.

Refer to Annexure A for an example of the market value method.

9.4.3 Adjusted book value method

The book value of a company is the value of the company based on its statement of financial position. The book value is the total value of the

[7] Formula to calculate enterprise value = Market capitalisation (current equity price) + Debt – Cash and Cash equivalents.

company's assets minus the total value of its liabilities. This amount will equal the owner's equity in the company.

Adjusted book value is the most common variation of the book value method. It looks at the value of a company in terms of the current market values of its assets and liabilities. It is the measure of a company's statement of financial position after liabilities, including off-balance sheet liabilities, and assets are adjusted to reflect a fair market value.

The adjusted book value can be calculated as follows:

The fair value of the assets – The fair value of the liabilities = The net assets value

The adjusted book value valuation method is most often used to assign value to distressed companies facing potential liquidation or companies that hold tangible assets such as property or securities, as intangible assets cannot be valued using this method.

Adjusting the book value requires line by line analysis. Some line-item values are easily determined, such as cash and short-term debt, as these items are already accounted for at the fair market value.

For line items not carried at fair value on a company's statement of financial position, alternative approaches will have to be used to determine market values. Alternative approaches include the following.

i. <u>Fair value as basis for the book value</u>

This method can be applied to all assets and liabilities for which a fair value is available in the market. For some of these items, a quoted price in active markets will be available, requiring no adjustments: for example, publicly traded equity investments (however, in the DI's accounting records it is accounted for at cost). For other line items, a directly quotable market price might not be available, and adjustments will be required to adequately reflect the fair value of the assets being valued: for example, an office building. Adjustments to the available market prices may have to be made to reflect the fact that the sale must be completed within a short period of time, regardless of whether there is a directly quotable market price available.

ii. Amortised cost as a basis for book value

This approach applies to specific assets for which a fair value is not available. An example is a unique machine which was developed according to the specific needs of the DI and will not be useful to another institution in its current form, resulting in a fair value not being available. Additional adjustments should be considered when making use of the amortised cost to determine the book value. If, for example, the machine is so unique to a specific DI that there is no market appetite for the machine, it will have an adjusted book value of zero.

Refer to Annexure A for an example of the adjusted book value method.

9.4.4 Equity valuation

Equity value is the value of a company that is available to its shareholders. It is the value that is available after the DI’s liabilities have been subtracted from its assets. This value belongs to both majority and minority shareholders. For resolution purposes, the valuation of equity will be required, for example, in the following scenarios:

i. To determine the extent of bail-in required.
ii. To calculate the value in an event where the equity will be sold to a third-party buyer or transferred to a bridge institution.

Refer to Annexure A for an example of an equity valuation.

Choosing a valuation method

A DI should use the criteria in this document to identify the most appropriate method for determining the value of its assets and liabilities. It should be able to justify the method chosen for valuation purposes. Choosing the appropriate method will be influenced by the envisaged resolution action. Examples of this include:

i. Maintaining the assets: The hold value will have to be calculated. The discounted future cash flow methodology may be the most appropriate method.

ii. Transferring of assets and liabilities: The disposal value needs to be calculated. An appropriate methodology has to be identified to determine the amount that an informed party is willing to pay for the assets and liabilities under the current economic circumstances. Depending on the circumstances, the discounted cash flow, adjusted book value, or market value method might be appropriate.

iii. Conversion of capital or other liability instruments: An estimation of the post-conversion equity value of the shares should be calculated based on the anticipated future value of the restructured entity. The present value of future cash flows method might be the most appropriate method.

When the DI is not sure of the envisaged resolution action, it should base the valuation on the information at its disposal.

Some valuations will have to be performed by the independent valuator, in which case the DI's valuation model does not necessarily need to provide a valuation result, but the relevant information has to be made available to the valuator.

Sometimes it may be easier to divide the DI into different parts and use different valuation methods on the individual parts. The valuation of the whole DI will then be equal to the sum of the individual valuations.

Where a definitive valuation cannot be performed, or in cases of urgency, a provisional valuation can be used as the basis for a resolution action. An ex-post valuation will then be done to ensure that the NCWOL safeguard has been met. The outcome of the ex-post valuation will not impact the resolution action taken.

Where the independent valuator is performing the independent valuation using the DI’s valuation model, the valuator must prioritise areas that contribute most to the valuation uncertainty and factors that impact the key valuation assumptions.

10. Special considerations

The DI’s valuation capabilities should ensure that the valuation method can consider elements that require special consideration. These elements will be different for each DI. The DI should review its group structure, resolution group, types of business, strategy and resolution plan to identify these elements. Examples of these elements are discussed below.

10.1 Operational costs

The resolution strategy to be followed – that is, an open or a closed resolution approach – and a range of other factors might severely impact the operational costs of the DI in a resolution compared to a business-as-usual scenario.

DIs must, where possible, consider continued operational costs, a reduction in operational costs and possible additional operational costs for valuation purposes. In instances where the DI cannot be expected, or where the DI omitted, to appropriately consider these elements, the independent valuator will be responsible for the adequate consideration.

The DI should calculate and group the existing and the additionally expected operational cost, in the event that resolution might be triggered. These groupings will assist the valuator in determining the operational cost requirement during a resolution.

DIs should use the following groupings:

Fixed	The cost is completely fixed and cannot be reduced without affecting the continued functioning of the DI's critical functions or affecting the DI's ability to adhere to applicable laws and regulations.
Partially variable	The cost is required to ensure the functioning of the critical functions and the adherence to applicable laws and regulations, but can be reduced as activity is reduced.
Variable	The cost is variable and can potentially be reduced to zero.

The DI and the independent valuator should, as far as practicable, consider an increase in operational cost as a result of dis-synergies. For example, when a bridge institution is set up, it could result in a dis-synergy from various overhead costs for which the bridge institution would have to obtain separate service providers.

Given the chosen resolution action, some scenarios will reduce operational cost when the entity is placed in resolution and will have to be adequately considered by the DI and the independent valuator on a best effort basis. Reasons for the reduction in operational cost might include:

i. no new business being generated; and
ii. the sale of specific business units or subsidiaries.

The independent valuator should, as far as practicable, consider possible additional operational cost which may result from the execution of resolution actions. Additional operational cost may include:

i. liquidation costs;
ii. costs due to implementation of the resolution actions;
iii. costs associated with closing a business;
iv. costs caused by running down one or more business lines;
v. set-up costs (setting up a bridge institution); and

vi. legal and administrative costs to run the business while in resolution.

The DI must have the required information available in the format as set out in Table 3 below to assist with a determination of the operational cost.

Table 3: Operational cost breakdown

Operational cost	F/PV/V[8]	Monthly average cost in a business-as-usual situation (R'000)	Monthly expected cost in resolution[9] (R'000)	Monthly additional cost due to resolution[8] (R'000)
Usual expenses				
Example				
Business premises rental	F	2,000	2,000	
Salaries	PV	34,000	13,000	
Marketing	V	1,500	0	
Additional expenses[8]				
Example				
Liquidation cost				200

10.2 Contingent assets and liabilities

A contingent asset may arise because of a gain that is contingent on future events that are not under the DI's control. According to the accounting standards, a business does not recognise a contingent asset even if an associated contingent gain is probable.

For resolution purposes, the determination of possible contingent assets will be the responsibility of the independent valuator. The determination of the value

8 F – fixed, PV – partially variable, V – variable

9 This section of the template will be completed with assistance from the RA as part of the development of the DI's specific resolution plan.

associated with the contingent asset, such as a financial guarantee received, will require expert judgement.

If, for example, the financial guarantee is considered to be realistically recoverable, the independent valuator should identify an appropriate method to value the financial guarantee which can then be considered by the RA.

A contingent asset should only be considered if its materialisation is highly probable. Even in such a scenario, the independent valuator should apply an appropriate haircut since the realisation of the asset is not under the control of the DI.

A DI must maintain a list, including the possible values of all contingent assets. The independent valuator will decide which of these assets to consider and at what value.

A contingent liability is a liability that may occur based on the outcome of an uncertain future event. A contingent liability is recorded in the DI’s accounting records if the contingency is likely to materialise and the value can be reasonably estimated.

To value contingent liabilities, the DI should first identify all potential contingent liabilities. The information in the DI’s accounting records can form the basis of the identification, but additional analysis by the independent valuator might be required to ensure completeness.

The valuation of a contingent liability will depend on the nature of the liability, for example pension-, litigation- or tax-related provisions. The use of probability weighted cash flows might prove an appropriate valuation method, in which case the cash flows would be determined using different scenarios and these cash flows would then be weighted according to the probability of these scenarios realising.

When performing valuations relating to contingent assets and liabilities, expert judgement will be required for each of the possible provisions, for example, a tax expert will be required for a tax-related provision.

11. Valuation ranges and buffers

Given the nature of resolution and the variety of valuation methods, an exact valuation will be near impossible. The DI should, where applicable or when specifically requested by the RA, be able to provide the RA with valuation ranges, together with the information required to consider appropriate valuation buffers. Similarly, the independent valuator should also provide the RA with valuation ranges and their professional judgement in terms of valuation buffers.

The valuation ranges and buffers that will be expected from the DI will be during a pre-resolution scenario (for example, when compiling the resolution plan), whereas the valuation ranges and buffers expected from the valuator will be during an in-resolution scenario (for example, when determining the most appropriate resolution action).

11.1 Valuation ranges

In some cases, the DI and/or the independent valuator might make use of more than one valuation method to ensure that a reasonable valuation is used. In such a case the valuation outcome derived from the different valuation methods used might be materially different. The DI and/or independent valuator must then provide a valuation range based on the valuation results of the valuation methods used.

The valuator, as well as the DI where applicable, must provide the RA with enough information to make an informed decision regarding which value within the valuation range to use. Examples of this information include:

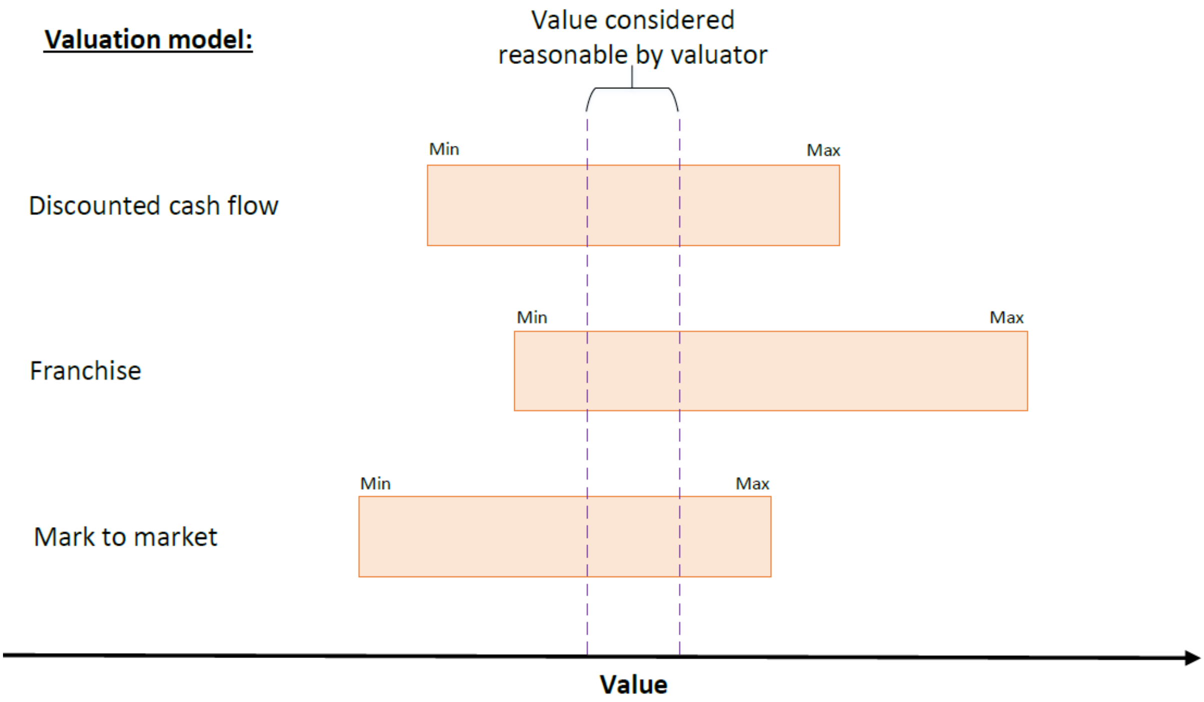
i. An explanation must be given of the valuation methods used to determine the valuation ranges.

ii. If a material gap[10] exists between the minimum and maximum valuation, an explanation must be provided.

[10] A material gap can be defined as a difference of $\geq$20% between the minimum and maximum valuation.

iii. The independent valuator must indicate the best estimate valuation based on their knowledge and professional judgement.

Figure 3: Determining the best estimate value based on multiple valuation methods



11.2 Buffer inclusion for possible losses

The independent valuator should include buffers to estimate the possible impact of the chosen resolution action, a possible change in market conditions, or a change in timing that might affect the value. The buffers should also address the uncertainty of provisional valuations.

The independent valuator should document and explain the assumptions used to determine the size of the buffer to ensure that the assumptions have not already been used in the valuation method which would result in double counting of potential losses.

In determining the size of the buffer, the independent valuator should consider factors that might reasonably affect the valuation, the extent of the factor and its impact on the valuation. An example would be the inclusion of additional losses in the cash flow valuation model to consider factors such as the state of the market and the chosen resolution strategy.

When calculating possible buffers, the following should be considered and executed accordingly:

i. All factors that could potentially impact the valuation should be listed.
ii. The combined impact of factors that could occur simultaneously should be determined, even if this requires the use of weightings between the factors.
iii. If the factors are mutually exclusive, the factor with the highest impact should be identified, explained and calculated.

The valuator may extrapolate losses calculated for part of the entity’s assets to the remainder of the balance sheet. If the calculation had been performed for a similar business, the calculation can be used and adjusted accordingly. The changes in the assumptions and calculations used in the extrapolations should be clearly documented.

12. Criteria to be considered for the role of an independent valuator

The role of an independent valuator for resolution purposes can only be performed by a legal or natural person with relevant experience, knowledge, capacity and independence. The person should meet specific criteria before their independence is assessed. They must have:

i. relevant qualifications, experience and knowledge to deliver high-quality and timely valuations; and
ii. relevant and sufficient resources to perform their valuation duties with due care and without support from other parties, including the RA.

The independence of the independent valuator is important to avoid undue influence and bias to ensure a true reflection of the asset and liability values, which is necessary for the execution of the best available resolution strategy.

The SARB will pre-identify possible valuators by assessing the following criteria relating to independence:

i. **Consulting or similar arrangements**: The existence of current working arrangements, such as consulting, between the applicable DI and the valuating company.

ii. **Financial links**: The existence of any financial links, such as a financial exposure or shareholding, between the applicable DI and the valuating company (or any of its senior employees, including their immediate family members).

iii. **Boards and committees**: Membership of the senior management of the valuating company, or their immediate family members, on any of the boards or committees of the applicable DI.

iv. **Internal and external audit firms**: Involvement by the valuating company, its senior management or their immediate family members in the internal or external audit of the applicable DI.

Not all conflicts of interest will result in the relevant company being excluded from the RA's consideration. The RA will, on an individual basis, ensure that any material conflicts of interest are considered prior to the appointment of a valuator.

All pre-identified contracted valuators should:

i. implement and/or maintain policies and procedures to identify and document their material interest in the DIs that the RA may request them to value;

ii. immediately notify the RA of any potentially material interest; and

iii. implement appropriate procedures to ensure that the employees involved in a valuation have no material interest in the DIs to be valued on request of the RA.

Given time constraints during resolution, the RA will pre-identify possible valuators. Furthermore, agreements specifying the requirements, expectations and remuneration will be initiated between the RA and the shortlisted valuators at the earliest stage possible to ensure it is finalised before a resolution is triggered.

13. Special considerations by the independent valuator

To ensure a reasonable valuation for the resolution authority to execute a resolution strategy, the independent valuator should consider DI-specific elements. Some elements that might require consideration include the following:

13.1 Identifying areas of uncertainty and the possible impact on the valuation

The independent valuator should focus on possible areas with significant valuation uncertainty since this can impact the overall valuation. They must provide best-estimate valuations and value ranges for these areas, which include:

i. loans or loan portfolios where the repayments are linked to a counterparty's ability to pay and there is sufficient evidence that the counterparty is experiencing financial difficulty;
ii. the value of assets belonging to entities that have been closed, especially since these assets may no longer be able to generate income and will have no market value;
iii. instruments that are measured at fair value, but for which a mark to market value is no longer available;
iv. goodwill and intangible assets, since impairment tests rely on judgement;
v. legal disputes where the outcome is uncertain;
vi. pension assets which could affect the beneficiaries of a fund;
vii. any unrealised gains, which should be separated from the valuation; and
viii. unordinary gains or losses, which should be adequately identified and considered.

13.2 Factors affecting valuation

In the event that the valuation model did not take into consideration factors that might influence the key assumptions, the independent valuator should consider such factors. These factors include:

i. the economic and industry-specific circumstances affecting the DI;
ii. the DI's business model and any changes to its strategy;
iii. circumstances that could influence the risk-weighted assets and capital requirement;
iv. the DI's ability to generate predictable cash flows;
v. general or entity-specific liquidity constraints; and
vi. market perception and appetite.

13.3 General principles to be considered by the independent valuator

The independent valuator should consider the following principles:

i. The independent valuator should assess the impact of each possible resolution action on the valuation.
ii. The independent valuator should make the RA aware of future losses that cannot be accounted for due to International Financial Reporting Standards requirements, including the extent of the losses and their estimated future date.
iii. The independent valuator must be able to provide an estimated post-conversion equity value of the new shares when capital instruments or other debt might be converted to equity by the RA.

13.4 Treatment of shareholders and creditors in resolution

The independent valuator should, if applicable, determine the outstanding claims after the write-down or conversion of capital instruments and the execution of any other of resolution action. Outstanding claims must be allocated to the shareholders and the creditors of the DI, as at the resolution date.

The independent valuator must determine the value and number of shares that shareholders and/or creditors should receive in the event of an equity compensation, while ensuring that the NCWOL safeguard is adhered to. The value of these shares must be based on available market prices or any generally accepted valuation method for determining equity prices.

The independent valuator should determine the relevant compensation value when shareholders and/or creditors receive debt compensation[11]. The independent valuator should consider changes in contractual cash flows (resulting from write-downs, conversions or other resolution actions) and applicable discount rates.

For any outstanding claim, the independent valuator may consider prices in active markets for similar instruments issued by the DI, by any other institution under resolution, or a similar instrument issued by an entity under similar circumstances.

13.5 Valuation requirements in the event of a bail-in

Debt instruments can be written down or converted into equity to absorb losses and recapitalise the DI when bail-in is used as part of the resolution strategy. The independent valuator must do the following to assist with the successful implementation of bail-in:

i. Determine the net asset value (NAV) prior to using bail-in.
ii. Identify liabilities eligible for bail-in, together with their respective insolvency rankings.
iii. Determine the write-down amount required to absorb the losses and restore the NAV to zero.
iv. Determine the amount of liabilities to be converted to restore the DI’s capital to the required ratio (based on the PA’s requirements and to instil market confidence).

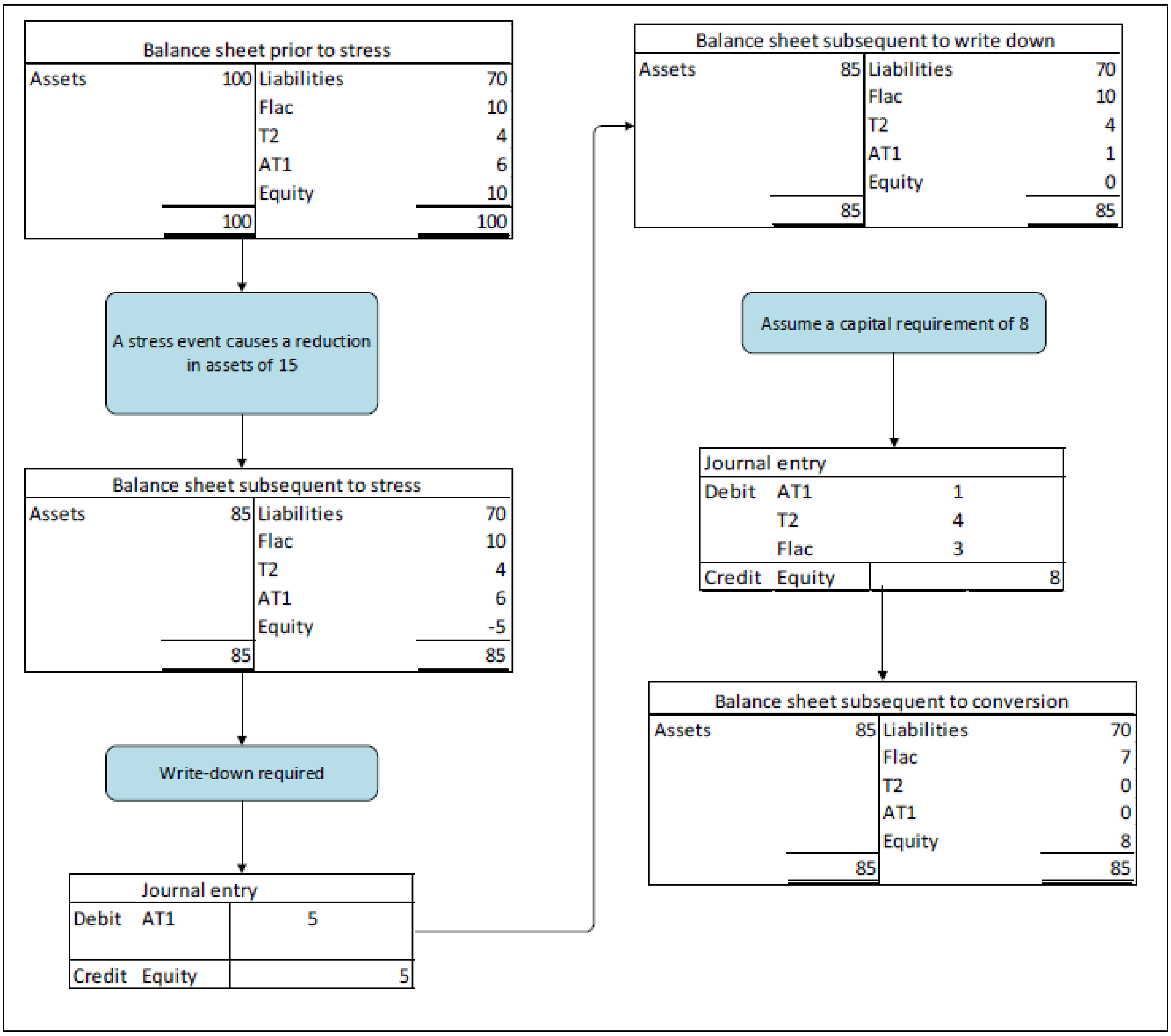
[11] An example of debt compensation is deferred compensation.

v. Determine the post-conversion equity value.

vi. Determine the debt-to-equity conversion rate.

Figure 4 illustrates the steps required for implementing a bail-in.

Figure 4: Example of steps required in the event of a bail-in



13.6 Valuation requirements for establishing a bridge institution

The purpose of a bridge institution is to establish a temporary institution to ensure that access to a DI's critical functions is maintained while the DI is in resolution. The bridge institution can be established either by transferring shares, or assets and liabilities, from the DI in part or in full.

The bridge institution should be solvent, meaning that the value of the assets transferred from the DI to the bridge institution must exceed the value of the liabilities.

When a transfer to a bridge institution is chosen as the resolution strategy, the *hold value* cannot be used for valuation purposes as the assets and liabilities will be transferred. Instead, the *disposal value* should be used.

The same valuation model can, in some circumstances, be used for both the hold and disposal value, but the assumptions and inputs might be different, which will result in different valuations outcomes. For example, a discount should be applied to the normal market price to consider the effect of an accelerated sale when determining the disposal value compared to the hold value.

14. Valuation report

The independent valuator should prepare a valuation report to assist the RA with the resolution. The quality of the report should be such that an expert with similar information would come to the same conclusions. The valuation report should include the following information, as a minimum:

i. Executive summary
   - A summary of the valuation results.

ii. Introduction
   - Discussion of the purpose of the valuation.
   - Identification of the institutions valued.
   - Identification of the valuation date.

iii. Approach
   - Scope of the valuation.
   - Any restrictions that may affect the valuation results.
   - Sources used to perform the valuation.

iv. Background and overview
   - High-level overview of the economy.

- High-level overview of the industry.
- High-level overview of the DI in resolution.
- The overview should also include a forward-looking aspect addressing the industry and the economy.

v. Valuation methods
- Discussion of and motivation for the valuation methods.
- Discussion of areas that influence the valuation method used, such as the discount rate.
- If applicable, an explanation of the difference in the valuation value compared to other relevant valuations.

vi. Valuation assumptions
- Discussion of the underlying assumptions used for the valuation by addressing elements such as:
  (a) credit spreads;
  (b) cost of equity; and
  (c) comparable data that were used to develop the assumptions.

vii. Specific elements of the valuation
- How the cost reduction, synergies and operational cost requirements were calculated and the assumptions used.
- The approach and process used to valuate contingent assets and liabilities.
- Where identified losses are not reflected in the statement of financial position, they should be identified and quantified in the report.

viii. Valuation ranges and buffers
- An indication of the valuation uncertainties and the possible valuation ranges.
- Discussion of the calculation of valuation buffers for additional losses.
- Discussion of assumptions, justification and reasoning used in the buffer calculation.
- Discussion of whether the calculation was done on a single asset or aggregate level.

ix. Resolution tools

Depending on the resolution approach, the report should address specific elements, which are dependent on the resolution tool used. These include:

(a) Bail-in tool

- Explanation of the aggregate amount of write-down required to absorb losses and restore the NAV to zero.
- A breakdown of the write-downs required in line with the insolvency hierarchy.
- Identification of the post-conversion equity value.
- Proposed treatment of creditors and shareholders.

(b) Sale of business approach

- The terms of the proposed sale.
- Identification of the assets and liabilities to be sold and their estimated value.
- Elements such as franchise value, disposal value, liquidation value and equity value should be addressed, where applicable.
- Assessment of whether bail-in is required for recapitalisation purposes.
- Valuation of the legacy entity, if applicable.

(c) Bridge institution

- Identification of the different categories of assets and/or liabilities and/or equity to be transferred and their valuations.
- Assessment of whether bail-in is required for recapitalisation purposes.

x. Additional information available

- Information available after the valuation should be identified, assessed and quantified as best as possible.

xi. Identification of other valuators

- Other valuators or advisors involved should be listed, with their contributions.

xii. Statements required

- Statement that the valuation complies with the relevant laws, as well as the requirements as set out by the RA.

xiii. Statement of independence of the valuator.

- A statement confirming the independence of the valuator.

xiv. Conclusion

- An overall conclusion of the valuation report.

15. Simulations requirements

Simulations will be required to test the valuation capabilities of the DI and assess the sensitivity of the valuation model when changing the inputs and assumptions.

The DI's specific resolution plan and the resolution strategy should be simulated to determine whether the DI can provide quality data in a timely manner to facilitate quick decision making.

The DI must appoint a RA-approved independent third party to facilitate resolution simulations every five years, or when the DI has undergone a significant change, in terms of business model or organisational structure.

The DI needs to complete its first resolution simulations within three years of the RA completing the DI's specific resolution plan and communicating its contents to the DI.

16. Consequences of non-compliance

The RA will, on an ongoing basis, assess whether the relevant valuation requirements are met. The results of the simulation exercises will be used, where possible, to assist with the assessment. Should the RA be of the view that the requirements are not adequately met by the DI, it may lead to any of the following actions:

i. an increase in in the required level of Flac instruments, where applicable;

ii. an increase in regulatory required capital, after consultation with the Prudential Authority; and

iii. an accelerated triggering of resolution.

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Annexure A

Example: Using discounted cash flow to calculate enterprise value

Enterprise value definition: The value of the underlying business of an institution, unencumbered by debt and separated from cash and marketable securities.

Enterprise value formula: present value of free cash flow + present value of terminal value

Definition of free cash flow: The value available to the institution to pay its investors.

Free cash flow formula: EBIT x (1-tax rate) + depreciation – capital expenditure – increase in net working capital

	2016	2017	2018	2019	2020	Total	
Earnings before interest, tax, depreciation and amortisation (EBITDA)	13,950	14970	13881	15210	16410		
Less depreciation	-399	-425	-453	-483	-515		
EBIT	13,551	14,545	13,428	14,727	15,895		
Tax	-3,906	-4,171	-4,454	-4,756	-5,078		
Normalised operating profit after tax	9,645	10,374	8,974	9,972	10,817		
Add back depreciation	399	425	453	483	515		
Change in working capital	-1,267	-411	-407	-389	-287		
Capital expenditure	-561	-580	-620	-1080	-1120		
Free cash flow (FCF)	**8,216**	**9,808**	**8,400**	**8,985**	**9,925**		
Discount rate (based on WACC)	12.00%	12.00%	12.00%	12.00%	12.00%		
Discount period	-	1	2	3	4		
Present value of FCF	**8,216**	**8,757**	**6,697**	**6,396**	**6,308**	**36,373**	
Terminal value						**Terminal value**	
Normalised operating profit after tax						10,817	
Add back depreciation						515	
Capital expenditure						-1120	
						10,212	
Assumed growth factor						105%	
						10,723	
Expected growth in working capital						-321	
Working capital funded in last forecast year					-6,425		
Assumed growth					5%		
Expected free cash flow						**10,401**	
Divided by difference between WACC and assumed growth rate						7%	
WACC					12%		
Assumed growth rate					5%		
Terminal value						**148,590.71**	
Discount factor						12%	
Discount period						5	
Discounted terminal value						**R 84,314**	
Enterprise value							**R 120,688**
Discount rate to allow for an accelerated sale							20%
Adjusted Enterprise value							**R 96,550**

Example: Market value valuation method

The market approach is a method of determining the value of an asset based on the selling price of similar assets.

Market value method	
Earnings before interest, tax, depreciation and amortisation (EBITDA)	**13,950**
Minus margin on once off projects	-165
Add back any forex losses	867
Add back non-operating expenses	236
Adjusted EBITDA	**14,888**
EV/EBITDA multiples	
Competitor A	6.2
Competitor B	7.9
Competitor C	5.9
Average	**6.67**
Adjustment required	-3.4
Difference in growth profile	-0.5
Difference in strategy	-0.3
Specific risk	-1.3
Systemic risk adjustment	-0.8
Accelerated sale	-0.5
Adjusted EV/EBITDA multiple	**3.27**
Enterprise value (EBITDA x multiple)	**48,634**

Example: Adjusted book value valuation

Adjusted book value measures an institution's value by taking into account all on balance sheet assets (adjusted to fair value) and subtracting all liabilities (including off-balance sheet liabilities).

	Book value	Adjusted value
Assets	680,000	**495,000**
Cash	80,000	80,000
Short term negotiable securities	100,000	95,000
Loans and advances to customers	220,000	170,000
Investments	150,000	110,000
Property and equipment	90,000	40,000
Goodwill and other intangible assets	40,000	-
Liabilities	545,000	**545,000**
Deposits	130,000	130,000
Policy holder liabilities	190,000	190,000
Derivatives	40,000	40,000
Term debt	100,000	100,000
Off-balance sheet liabilities	85,000	85,000
Adjusted book value of assets	**495,000**	
Discount rate to allow for an accelerated sale	20%	
Adjusted book value (post discount)	**396,000**	
Adjusted book value of liabilities	**545,000**	
Net asset value	**-149,000**	

Example: Equity valuation

Equity value is the value of a company available to owners or shareholders. It is the enterprise value plus all cash and cash equivalents, short and long-term investments, and less all short-term debt, long-term debt and minority interests.

Enterprise value	**120,688**	N1
Non-operating assets and liabilities	8,000	N2
Vacant land	6,000	
Cash	4,000	
Tax liability	-2,000	
Value of non-marketable majority basis	128,688	
Add control premium (10%)	12,869	N3
Less discount (35%)	-45,040.65	N4
Value on a marketable majority basis	**96,516**	
shareholding valued	80%	
80% of marketable majority basis	**77,212.55**	

N1	Refer to discounted cash flow example used to determine enterprise value.
N2	Enterprise valuation does not include non-operating assets and liabilities
N3	A majority shareholding implies an influence of control over the institution. A premium of 10% in order to exercise control is assumed reasonable.
N4	This is to make provision for the lake of marketability. This might be due to the fact that the entity is not listed, the unfavourable market conditions, or the speed at which the sale needs to be concluded.