



# *Market Risk Review*

May 2007

Prepared by the Financial Management Department



## *Introduction ...*

- **The AfDB's over-arching risk management philosophy is to maximize the risk bearing capacity available to support its development activities (core business risks).**
- **One way to achieve this is to minimize exposure to non-essential sources of risk such as market risk (non-core risks).**
- **The purpose of this presentation is twofold:**
  - examine the Bank's policies and guidelines for managing market risk and assess their effectiveness.
  - evaluate the impact of other policy changes on the way the Bank manages market risk.

2

- The Bank manages the various risks to which it is exposed within an over-arching risk management philosophy. The essence of this philosophy is to maximize the risk bearing capacity that is made available to support the Bank's development activities (the Bank's core business risks). To do this, the Bank seeks to minimize its exposure to other sources of risk that are incidental to the Bank's development mandate (non-core risks).
- Market risk is the potential for loss (either financial or non-financial) due to changes in market factors such as interest rates, exchange rates or liquidity and is considered a non-core risk by the Bank. Consequently, the ADB seeks to reduce to the extent possible its exposure to the various forms of market risk.
- This presentation is the annual review of the Bank's market risk management prepared for Senior Management and the Board. The purpose of this presentation is twofold. First, the presentation will review the Bank's market risk management objectives and the strategies employed by the Bank to achieve these objectives. Second, it will assess the effectiveness of these strategies over the past year.

*This presentation is organized in four parts...*

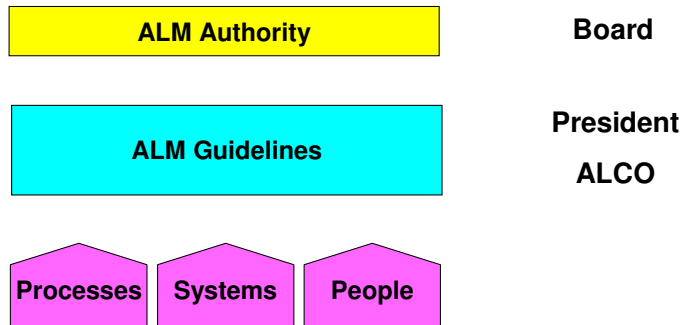
- **Currency Risk**
- **Interest Rate Risk**
- **Liquidity Risk**
- **Counterparty Credit Risk**

3

- This presentation is organized in four principal sections.
  - The first section focuses on currency risk. It will show that measures taken (as part of the Bank's financial reform program) have been effective in reducing the Bank's exposure to movements in currency exchange rates.
  - The second section examines interest rate risk. It will demonstrate that the Bank's interest rate benchmarks are performing as expected.
  - The third section of this presentation looks at liquidity risk. It will show that the risk of a liquidity shortfall for the Bank is negligible.
  - The fourth section examines the Bank's exposure to counterparty credit risk arising from asset and liability management operations. It will show that although the growth in liquidity has increased the overall exposure, this exposure is increasingly limited to high quality assets.
- 
- Before getting into the core parts of this presentation, lets first briefly review the Bank's framework for managing its exposure to market risk.

*The AfDB Group's market risk policies and strategies are managed under the ALCO control framework*

**ALCO Control Framework**



4

- The Bank Group's market risk management policies and strategies are managed under the ALCO control framework (Asset and Liability Management Committee). The ALCO control framework is supported at three primary levels. In 1998, as part of the Bank's financial reforms, the Board approved an umbrella document called the Asset and Liability Management Authority. This Authority was intended to link the various policies into an integrated framework. In 2005, the Bank's market risk policies, covering currency, interest rate & liquidity risks, were fully integrated into the ALM Authority to create a single comprehensive policy document for market risk.
- One of the key innovations of the ALM Authority was the delegation to Management of the authority to develop detailed implementation guidelines for the Bank's asset and liability management operations. As a result of this flexibility, the Guidelines have been revised several times since 1998, with the latest update in 2005, to reflect developments in the capital markets and advances in the Bank's capacity to manage its risks.
- The third level of the Bank's asset and liability management framework is the implementation structure. This structure consists of detailed processes that are implemented through advanced treasury IT control systems by a team of finance specialists.
- The Bank's ALM framework is continuously improving to meet industry best practices.

*In the first part of this presentation ...*

- **Currency Risk**
  - Objectives
  - Policies & strategies
  - Effectiveness
- **Interest Rate Risk**
- **Liquidity Risk**
- **Counterparty Credit Risk**

5

- The first part of this presentation looks at currency risk. Currency risk is the potential loss caused by changes in market exchange rates.
- This section of the presentation begins by reviewing the Bank's principal currency risk management objectives. It then examines the strategies employed by the Bank to achieve these objectives. Finally, it assesses the effectiveness of these strategies.

*The AfDB strives to achieve two principal currency risk management objectives*

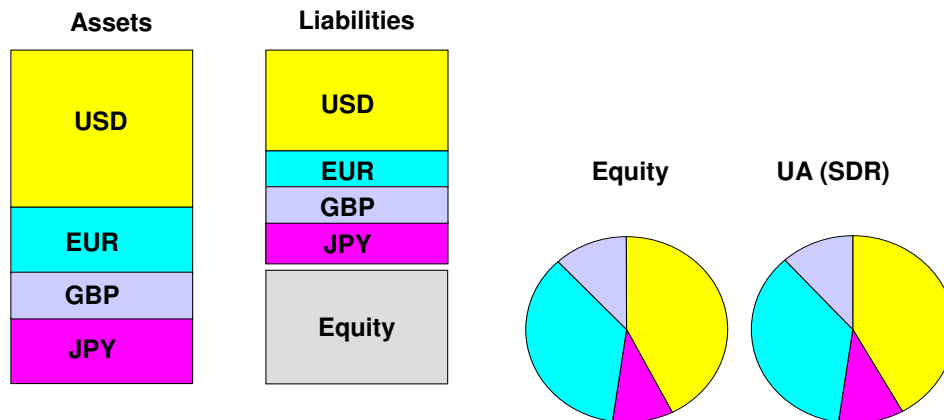
**Currency Risk Management Objectives**

- **Protect the Bank's risk capital from translation adjustments due to exchange rate movements.**
- **Protect the Bank from budget over-runs due to exchange rate movements.**

6

- The Bank's currency risk management policy strives to achieve two principal objectives.
- First, consistent with the objective of generating steady growth in its risk bearing capacity, the Bank's currency risk policy seeks to protect its risk capital from fluctuations in translation adjustments caused by currency exchange rate movements.
- Second, the Bank seeks to protect its budget from cost over-runs due to exchange rate movements. As we will see later in this presentation, this risk arises because of differences in the currency in which the Bank reports its budget, the Unit of Account, and the currencies in which it actually makes its administrative expenditures.
- These two sources of currency risk are examined in turn.

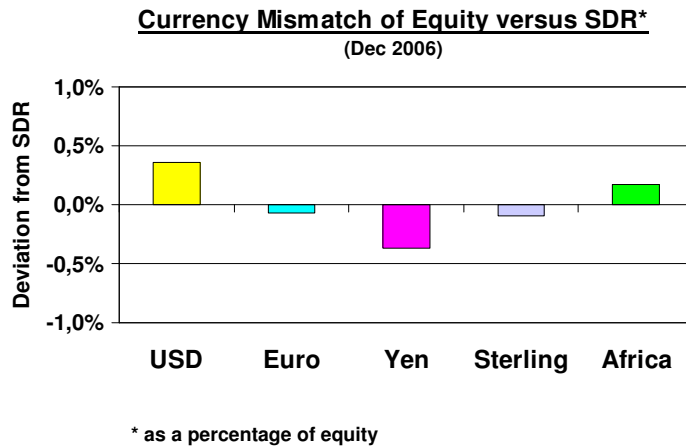
*To protect risk capital from exchange rate movements, the Bank aligns its equity with the SDR basket*



7

- Since the Bank's principal currency risk management objective is to stabilize the UA value of risk capital (the measure of risk bearing capacity), the Bank's strategy is to align the currency composition of its equity with the currency composition of the SDR. Given the mechanical relationship between the value of the four currencies making up the SDR and consequently the UA, if the currency composition of equity is aligned with that of the SDR, then fluctuations in market exchange rates will have perfectly off-setting effects on the UA value of the Bank's equity.
- As illustrated graphically above, the Bank determines the currency composition of its equity by deduction. The first step is to determine the currency composition of its various asset portfolios (loans, investments etc). The next step is to compute the currency composition of its liabilities (mostly borrowings). The currency composition of the Bank's equity is then computed by subtracting the currencies of liabilities from the currencies of assets.
- Towards the end of 2005, as a result of the IMF's review of the SDR basket (every 5 years), the currency composition of the SDR was revised, causing a sharp increase in the share of US Dollar in the basket at the expense of the shares of Euro, Japanese Yen and the Pound Sterling. Alignment trades have been executed accordingly in 2006.
- Let's now look at how closely aligned to the SDR benchmark the Bank was at the end of 2006.

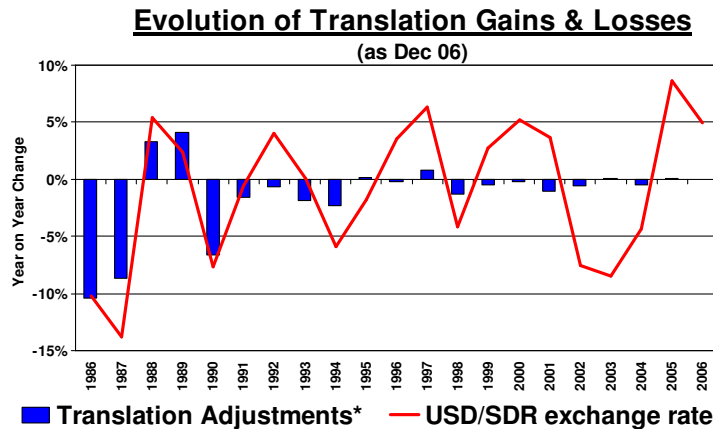
*The currency composition of the Bank's equity is closely aligned with the SDR*



8

- The chart above shows the distribution of the Bank's currency mismatches at the end of 2006. In an ideal scenario, the composition of the Bank's equity would be limited to the four SDR currencies. In reality, however, the Bank has a small residual amount of African currencies that the Bank is unable to convert into the SDR basket. As a result, the Bank must live with a small residual mismatch that it seeks to spread out as evenly as possible across the four SDR currencies.
- To maintain the currency composition of the Bank's equity with the SDR currency basket, the Bank engages in periodic currency adjustment operations. For the most part, these adjustment operations generally focus on spot market (cash) conversions of liquid assets to maintain the desired alignment. Currency alignment transactions are approved each quarter by ALCO based on the analysis and recommendations of the currency risk working group.
- As can be observed, the mismatches in all the main currencies were under 0.4%, indicating very close alignment. Let us now look at the actual impact this effort to minimize the currency mismatches has had on the objective of protecting the UA value of the Bank's equity.

*Despite high volatility in market rates, the effect on equity has been well contained*

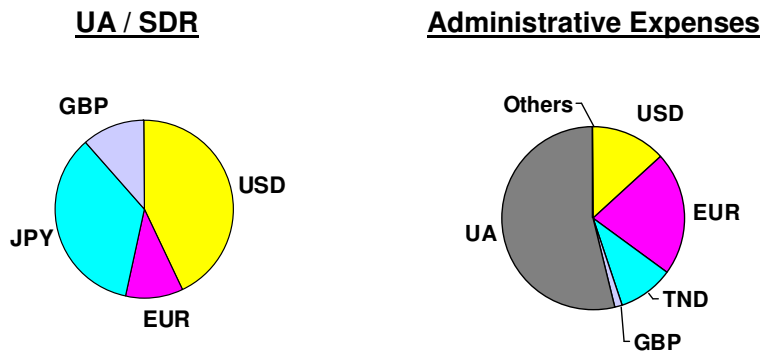


9

\* CCTA plus CEAS as a percentage of equity

- The above chart presents the year on year percentage changes of the UA value of the Bank's equity due to fluctuations in the currency exchange rates (bars) compared to changes in market exchange rates (line) since 1986. The USD/SDR exchange rate is used as a proxy for market exchange rates.
- Looking back at the results over the past two decades, several observations can be made. First, the USD/SDR rate has fluctuated up and down several times by +/- 5% with the sharp decline in the US dollar from 2002-04, followed by a steep appreciation of about 8% in 2005. Second, compared to the 1980s and early 1990s, the impact of this volatility on the Bank's translation adjustments in the past few years has been relatively muted. In 2006, the Bank's translation adjustments moved by less than 0.02%, despite the sharp depreciation in value of US Dollar; this impact can be considered well within the expected tolerances. This demonstrates that the Bank's currency risk management strategies are working as expected.

*The difference between the currency composition of expenses and the UA creates a risk of budget over-runs*



10

- The Bank budgets for its administrative expenditures in Units of Account. However, since actual expenditures are paid in currencies, if exchange rates fluctuate, the UA value of expenses will also fluctuate. The volatility introduced by exchange movements to the UA value of expenditures depends on both the volatility of the market rates and the actual currency composition of administrative expenditures. The chart above shows the currency composition of 2006 administrative expenditures compared to the SDR basket.
- As can be observed, although differences exist between the SDR and the composition of the Bank's expenses, a large part of the exchange risk is neutralized by the fact that salaries for professional staff and elected officials are denominated in UA. Analysis of the residual expenditures denominated in currencies shows that the bulk is in Euros or currencies such as the CFA that are linked to the Euro. This distribution means that if the Euro appreciates versus SDR then the actual UA value of the Bank's expenditures would also rise, which could inadvertently cause a budget over-run. The relocation to Tunisia in 2003 has also resulted in increased exposure to the Tunisian Dinar.
- The Bank protects itself from potential budget over-runs due to exchange rate movements by "hedging" the currency composition of its projected expenditures. To do this, the Bank purchases and sells currencies in the forward market to align the composition of projected expenses with the SDR.

*In summary...*

- **The Bank strives to minimize the potential impact of movements in exchange rates on its risk bearing capacity and its administrative expenses.**
- **By maintaining net assets aligned with the SDR basket, translation adjustments have been minimized while hedging administrative expenses has helped to reduce the risk of budget over-runs due to exchange rate movements.**

11

• This section of the presentation has looked at the effectiveness of the Bank's policies and strategies for managing currency risk. The highlights of this section can be summarized as follows:

- The Bank's principal currency risk management objectives are twofold. First the Bank seeks to protect its risk bearing capacity from movements in exchange rates. Second, the Bank strives to mitigate the risk of a budget over-run due to exchange rate fluctuations.
- To achieve these objectives, the Bank has implemented a strategy of aligning the currency composition of its equity with the currency composition of the SDR and hedging the major rate exchange risks in the administrative budget.

*In the second part of this presentation ...*

- **Currency Risk**
- **Interest Rate Risk**
  - Objectives
  - Policies & strategies
  - Effectiveness & refinements
- **Liquidity Risk**
- **Counterparty Credit Risk**

12

- The second part of this presentation looks at interest rate risk. Interest rate risk is the potential loss caused by changes in market interest rates.
- This section of the presentation begins by reviewing the Bank's principal interest rate risk management objectives. It then examines the strategies currently employed by the Bank to achieve these objectives. Finally, it assesses the effectiveness of these strategies and highlights areas where future improvements can be achieved.

*The AfDB strives to protect its financial performance from movements in market interest rates*

**Interest Risk Management Objectives**

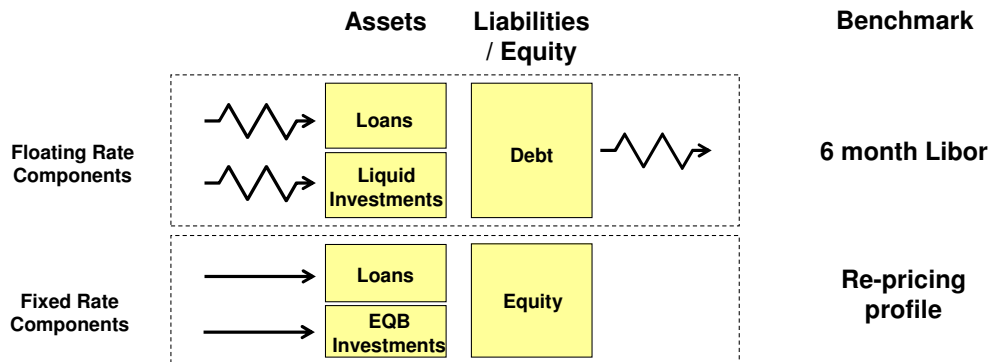
- **The AfDB seeks to maintain steady growth of operating income to reinforce reserves and provide for allocations.**
- **Net interest margin is the principal source of the Bank's operating income.**
- **The Bank's IRRM policy aims to protect its net interest margin from fluctuations in market interest rates.**

13

- Although maximizing profitability is not among the Bank's objectives, a steady level of net income is a key source of growth for the Bank's risk bearing capacity and for income allocations to other development initiatives.
- The key driver of the Bank's net income is the net interest margin it earns between the return on its assets and the cost of debt & equity funding those assets.
- As a logical consequence, the Bank's principal interest rate risk management objective is to protect its net interest margin from short-term movements in market interest rates.
- It is understood that the strategies that would help to stabilize the net interest margin would generally lead to increased volatility in another possible performance measure, the economic value of equity. This trade-off is an inevitable part of managing interest rate risk. With the implementation of the revised international accounting standards, which has led to more items on the balance sheet being stated at fair-value, the trade-off between stabilizing these two performance measures has become increasingly apparent.

*The Bank's strategies for managing interest rate risk are based on asset and liability matching*

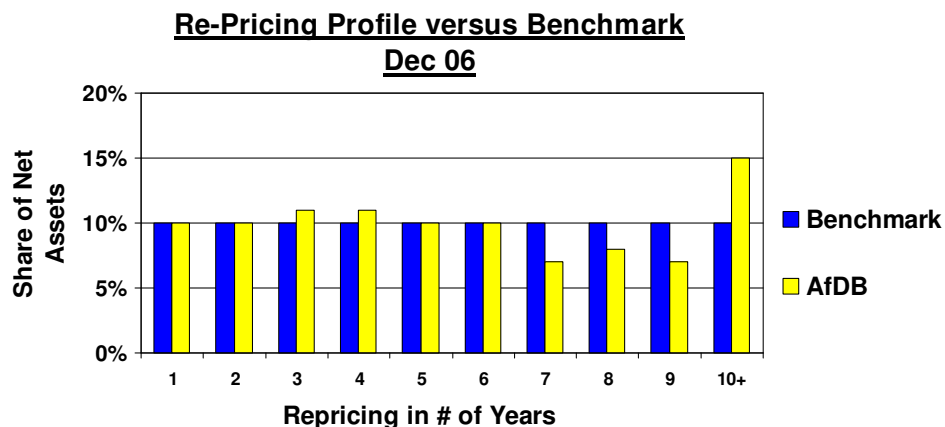
**Balance Sheet Interest Rate Structure**



14

- To protect its net interest margin from movements in market rates, the Bank's strategy is to match the interest rate sensitivities of both sides of the balance sheet. As illustrated schematically above, to achieve the desired matching the Bank's balance sheet is notionally divided into two components.
- The first component comprises floating rate assets and liabilities (shown with the zig-zag line cash flows). The distinguishing feature of floating rate assets and liabilities is the way their interest rates adjust periodically in line with short-term market rates. There are three principal asset and liability groups among the Bank's floating rate balance sheet components: borrowings; liquid investments; and floating rate loans. The floating rate components of the balance sheet are managed against a 6 month Libor interest rate benchmark to "lock-in" the Bank's net interest margin regardless of future rate movements.
- The second balance sheet component is the fixed rate group (shown with the straight line cash flows). The distinguishing feature of fixed rate assets and liabilities is the fact that their interest rate does not change until maturity regardless of changes in market interest rates. There are three principal asset and liability groups among the Bank's fixed rate components. On the liability side, the Bank is endowed with equity capital in the form of paid-in capital from shareholders plus accumulated reserves. Because the Bank pays no dividend to shareholders, the effective cost of equity is fixed at zero with no maturity. On the asset side, the Bank either disburses funds longer-term in the form of fixed rate loans or warehouses surplus funds in fixed rate investments as part of the "equity-backed investment" (EQB) portfolio. As shown in the next slide, these fixed rate components are managed against a re-pricing profile benchmark to generate a steady return on equity.

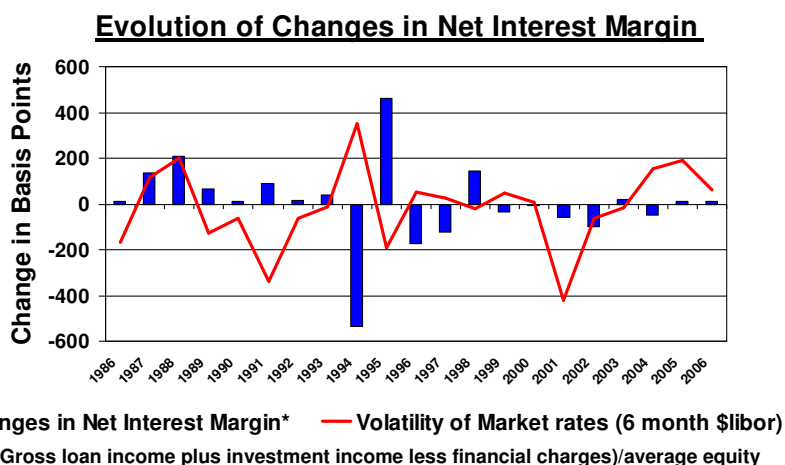
*The AfDB is closely aligned with its re-pricing profile benchmark*



15

- For the fixed rate components, which are funded by the Bank's equity, the Bank uses a re-pricing profile benchmark to align the interest rate sensitivity of its assets. As shown in the chart above, this benchmark is structured as a uniform 10-year re-pricing gap ladder (blue bars), whereby 10% of the Bank's assets funded by equity (otherwise known as net interest sensitive assets) mature or re-price in any given year. The share of net assets is shown on the vertical axis and the year of re-pricing is presented on the horizontal axis. Ideally, the re-pricing profile of the Bank's fixed rate assets (yellow bars) would be perfectly aligned to the benchmark and would thereby ensure that maximum 10% of the Bank's interest income would be exposed to short-term fluctuations in market rates while being adequately responsive to general market trends.
- To maintain alignment with this benchmark, the Bank manages the mix of fixed rate loans and equity-backed investments. As illustrated above, at the end of 2006 the Bank was closely aligned with the benchmark although there was a modest excess of assets re-pricing in 10 years or more offset by small shortfalls in the 7, 8 and 9 year buckets. Management executes adjustment transactions on an ongoing basis, using HTM assets and macro-hedge swaps, to improve the alignment of net assets with the benchmark. Interest rate adjustment transactions are approved each quarter by ALCO based on the analysis and recommendations of the interest rate risk working group.
- Let's now look at some data to see how effective this broad strategy has been.

*Despite recent market volatility, the Bank's net interest margin has been reasonably well protected*



16

- The chart above shows the year on year percentage change in the Bank's net interest margin (the bars) contrasted against changes in short-term market rates (the line) since 1986. Net interest margin (NIM) is measured as the sum of gross loan income plus investment income (interest earned plus capital gains or losses) less total financial charges for the year. To isolate the interest rate effects, this analysis factors out, for the period up to 2004, fluctuations in loan income due to credit events such as changes in accrual status or increases and decreases in arrears and it has been normalized by dividing by the average equity or net worth in each year. USD 6 month Libor is used as a proxy for market interest rates.

- Looking back at the Bank's past performance, several observations can be made. Until 1999, the change in net interest margin was roughly proportionate to the fluctuations in market interest rates. More recently, in the last 5 years however, despite continued sharp changes in the market interest rates as well as a surge in loan prepayments, the impact on the Bank's NIM has been relatively small. This muted impact of volatile market conditions demonstrates the general effectiveness of the Bank's interest rate risk management strategies.

*In summary...*

- **The AfDB strives to minimize the impact of movements in market interest rates on its net interest margin.**
- **Maintaining alignment with the interest rate benchmarks has helped to stabilize the Bank's net interest margin despite the continued fluctuations in market interest rates & the spike in prepayments.**

17

• This section of the presentation has looked at the Bank's policies and strategies for managing interest rate risk. The highlights of this section can be summarized as follows:

- The Bank's principal interest risk management objective is to protect its net interest margin from fluctuations in market interest rates.
- To achieve this objective, the Bank has instituted a strategy of dividing the balance sheet into floating rate components funded with debt and fixed rate components funded with equity. Interest rate benchmarks that embody the Bank's risk management objectives have been implemented for each component of the balance sheet.
- Statistical data shows that this strategy has been effective in reducing but not eliminating the impact of increasing market interest rates in the past year. The spike in loan prepayments over the past three years has diluted the impact of the implementation of the Bank's interest rate risk management strategies.
- Although the Bank's interest rate risk management strategies are having the desired effect, further refinements are underway to formulate possible solutions to address the risks associated with the winding down of the old risk pooling loans and to formulate specific strategies for local currency operations.

*In the third part of this presentation ...*

- **Currency Risk**
- **Interest Rate Risk**
- **Liquidity Risk**
  - Liquidity risk management objectives
  - Policies & strategies
  - Effectiveness
- **Counterparty Credit Risk**

18

- The third part of this presentation looks at liquidity risk.
- It begins by reviewing the Bank's principal liquidity risk management objectives. It then examines the strategies currently employed by the Bank to achieve these objectives. Finally, it assesses the effectiveness of these strategies over the past year.

*The AfDB strives to protect its financial performance from the risk of a liquidity shortfall*

**Liquidity Risk Management Objectives**

- **Fully mitigate the risk of a shortfall in liquidity.**
- **Maintain sufficient cash and liquid securities to meet its projected cash flow needs for 1 year without recourse to new financing from the capital markets.**

19

- The Bank's principal liquidity policy objective is to fully mitigate the risk of a shortfall in liquidity. Adequate liquidity is one of the factors under-pining the Bank's strong credit rating.
- To do this, the Bank's policy is to maintain sufficient cash and easily liquidated securities to be able to maintain normal operations over a one year horizon in the unlikely event that the Bank is unable to access new resources from the capital markets. Given the Bank's strong credit rating, the likelihood of such a stress liquidity scenario is considered to be extremely remote.

*The prudential minimum level of liquidity is the principal liquidity risk management mechanism*

**Liquidity Risk Management Mechanisms**

- **PML – Prudential Minimum Level of liquid assets set at projected net cash requirement for 1 year.**
- **Eligible Liquidity - all cash & trading investments plus HTM investments with a maturity less than 1 year.**
- **Maximum liquidity determined by debt limits: enhances funding flexibility.**

20

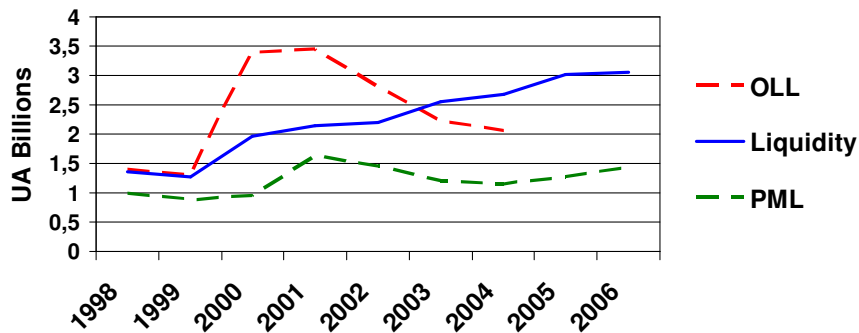
• The principal mechanism for implementing the Bank’s liquidity policy is the Prudential Minimum Level of liquidity (PML). The PML sets the minimum level of liquid assets that the Bank must maintain at all times. Since January 2003, the PML is computed quarterly as the projected net cash requirement over a rolling one-year horizon. The rationale for quarterly updating is to ensure that the PML closely tracks the Bank’s actual cash flow requirements.

• Compliance with the PML is monitored continuously and only truly liquid assets are considered as “eligible” for the liquidity policy. This includes all cash, deposits and trading investments. It also includes investments designated as “held to maturity” (HTM) if the remaining maturity is less than one year. In practice, this means that investments in the equity-backed portfolio longer than one-year are not considered as liquidity for the purpose of this policy. Nevertheless, these HTM investments do provide an additional cushion in the unlikely event of a severe liquidity squeeze.

• In 2005, as part of the consolidation of the market risk policies in the revised ALM Authority, the operational level of liquidity (OLL), which acted as a soft ceiling on the volume of liquidity, was substituted by a maximum level of liquidity that is now determined by the Bank’s debt & capital adequacy limits. The resulting flexibility in determining the pace of implementing the Bank’s medium-term borrowing program is expected to enhance the Bank’s ability to achieve lower funding costs.

*Prepayments in recent years have contributed to an abundance of liquidity*

**Evolution of Liquidity**



21

- The chart above shows the evolution of the PML and OLL (OLL only till 2004) policy and guideline limits as well as the actual level of liquidity for the past 8 years.
- As can be observed, the actual level of liquidity has remained consistently above the prudential minimum prescribed by the policy. This gives assurance that the Bank had more than sufficient liquidity to meet one-year's net cash requirement in the event of a market disruption.
- It is also notable that since 2003, actual liquidity has been on a rising trend even though the PML stabilized in the UA 1.2-1.4 billion range. This rise was driven by prepayments and the Bank's desire to take a more opportunistic approach to funding by allowing for a modest build-up in liquidity when market conditions are favorable. This situation is expected to continue in 2007, as a result of an additional Tunisia's prepayment announced early this year.

*In summary...*

- **The Bank strives to minimize the risk of a liquidity shortfall.**
- **The minimum level of liquidity is set at the projected net cash requirement for a rolling one-year period.**
- **Pre-payments have contributed to the steady increase in liquidity, well above the PML.**

22

• This section of the presentation has looked at the Bank's policies and strategies for managing liquidity risk. The highlights of this section can be summarized as follows:

- The Bank's principal liquidity risk management objective is to ensure the Bank has access to sufficient cash and liquidity to maintain normal operations for a one-year period without recourse to additional market resources.
- To achieve this objective, the Bank has instituted a policy of maintaining cash and liquid assets above the prudential minimum level of liquidity. The PML is set at the projected one-year net cash requirement.
- Throughout 2006, the level of liquidity remained well above the prudential minimum indicating that the risk of a shortfall of liquid resources was negligible. Prepayments contributed to put liquidity on a rising trend.

*In the fourth part of the presentation...*

- **Currency Risk**
- **Interest Rate Risk**
- **Liquidity Risk**
- **Counterparty Credit Risk**
  - Counterparty Risk Management Objectives
  - Policies and Strategies
  - Effectiveness

23

• The fourth part of this presentation looks at counterparty credit risk. Counterparty credit risk is the potential financial or non-financial (reputation) loss if a counterparty to an asset and liability management transaction is unable or unwilling to honor a contractual obligation to the Bank. Counterparty credit risk is distinct from the core credit risks incurred in the Bank's normal sovereign and non-sovereign lending operations, as it only relates to counterparties in the investment portfolio.

• This section of the presentation begins by reviewing the Bank's principal counterparty credit risk management objectives. It then examines the strategies currently employed by the Bank to achieve these objectives. Finally, it assesses the effectiveness of these strategies over the past year and highlights areas where further refinements can be made.

*The AfDB strives to minimize the risk of financial or non-financial loss due to a counterparty default*

**Counterparty Credit Risk Management Objectives**

- **The Bank's primary exposure to counterparty credit risk is through its investment portfolio.**
- **The Bank can also have exposure to derivative counterparties when the fair value of swaps is positive (the counterparty owes the Bank).**
- **The Bank seeks to minimize the risk that a credit loss from a counterparty default or downgrade could cause either a financial loss or damage the Bank's reputation.**

24

- The Bank incurs exposure to counterparty credit risk in two primary ways. The principal source of counterparty credit risk is the Bank's investment portfolio. The investment portfolio consists of the funds that are held in the Bank accounts or invested in a variety of securities.
- The Bank also incurs exposure to counterparty credit risk when it engages in derivative transactions such as swaps with a derivative counterparty. Although most swaps have a fair value of zero at inception, over time the evolution of market rates can cause the fair value of swaps to change either in favour of the counterparty or the Bank. To the extent that the fair value of swaps results in the counterparty owing the Bank at any given point in time, the Bank has an exposure to counterparty credit risk.
- As a non-core source of risk, the Bank seeks to reduce the risk that a counterparty default or rating downgrade could cause either a financial loss or damage the Bank's reputation. Although the Bank has a low tolerance for counterparty credit risk, it would be prepared to accept a modestly higher level of risk where such risk would have a tangible impact on its development assistance operations. An example of such circumstance would be for local currency operations where there are few, if any, highly rated counterparties active in the market.

*The AfDB manages its counterparty credit risk through a framework of four primary mechanisms*

**Counterparty Credit Risk Management Mechanisms**

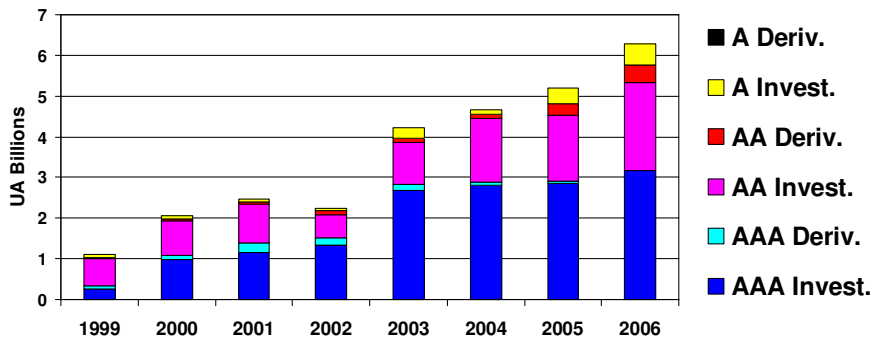
- **Approved counterparties – FNVP**
- **Minimum credit rating – “A” short-term, “AA” long term, “AAA” for Asset / Mortgage Backed Securities (ABS/MBS)**
- **Counterparty exposure limits – linked to counterparty rating, size, and the Bank’s risk bearing capacity**
- **Credit risk mitigation – Collateralisation netting and diversification**

25

- The Bank manages counterparty credit risk through a framework of 4 primary mechanisms.
- First, the Bank only transacts with approved counterparties. All counterparties are classified as either investment counterparties, trading counterparties, or derivative counterparties. All new counterparties must be formally approved by the Vice President, Finance, based on the business justifications from FTRY and the risk analysis from FFMA.
- Second, the Bank applies minimum credit ratings for all approved counterparties to reflect the credit risks inherent in different types of transactions. Generally the Bank requires higher ratings for longer term and more complex transactions.
- Third, the Bank operates a framework of exposure limits for each approved counterparty. Generally the Bank provides larger limits for higher rated counterparties and for counterparties with a larger risk capital base. The exposure limits are also linked to the ADB’s risk bearing capacity.
- The fourth element of the Bank’s counterparty credit risk management framework is risk mitigation. The Bank requires all derivative counterparties to complete standardized documentation that allows for “netting” of exposures from multiple transactions with a single counterparty. This generally has the effect of reducing the Bank’s net exposure. The Bank also seeks to lower its effective credit risk by diversifying exposures across a broad base of counterparties.

*Although exposure has grown, the Bank's credit risk profile is dominated by AAA rated counterparties*

**Counterparty Credit Risk Profile\***



\* Exposures based on mark to market value of investments and derivatives

26

- The chart above shows the evolution of the Bank's counterparty credit exposures from 1999 to 2006. Exposures are decomposed in terms of counterparty rating (AAA, AA includes AA- to AA+, A includes A- to A+) and type of counterparty (investments or derivative). All exposures are based on the estimated fair value of the related transactions on a net basis. Trading counterparties are excluded from this analysis because of their short term nature (these transactions are mainly exposed to settlement risk).

- As can be observed, the Bank's overall exposure to counterparty credit risk has increased by about 5 times since 1999. the bulk of this increase is attributable to the increase in assets invested either as liquidity or in the equity-backed portfolio. At the end of 2006, exposure to derivative counterparties was about 7% of the Bank's total counterparty credit exposure.

- Although total counterparty exposures have increased sharply, it is important to note that the rating profile of this exposure has improved over time. For example, the share of AAA rated counterparties in the Bank's total exposure has increased by 70% from 30% in 1999 to 51% in 2006. It is also notable that increasing the share of AAA counterparties in the portfolio has also tended to reduce the number of counterparties and hence to some degree has increased counterparty concentration. This has increased the importance of providing access to new risk mitigation techniques such as the purchase of Credit Default Swap (CDS) to hedge the counterparty risk exposure

*Further refinements in the Bank's counterparty credit risk management framework are underway*

- **Lower minimum rating for derivative counterparties where collateral arrangements are operational.**
- **Lower minimum rating for counterparties in local currency transactions.**
- **Introduce Credit Default Swaps (CDS) as credit risk mitigation tool.**

27

• Growth in overall counterparty credit exposure plus developments in the capital markets are providing a strong incentive to enhance the Bank's counterparty risk management framework. The main refinements are:

• With collateral exchange arrangements in place, the Bank can prudently lower the minimum rating for derivative counterparties to increase the portfolio diversification and improve pricing. This is particularly important in Japan where potential local counterparties are key players in the JPY capital market, yet do not meet the Bank's minimum rating.

• By lowering the minimum rating for counterparties in local currency transactions, the Bank can expand its development assistance in local currencies. The incremental risk is limited and justified by the potential development impact.

• The revised ALM Authority & the updated Guidelines allow new credit risk mitigation tools such as credit default swaps (CDS) in the investment portfolio. CDS will be introduced progressively as the Bank builds up experience with these instruments.

*In summary...*

- **The Bank strives to minimize the risk of financial or non-financial loss due to a counterparty default/downgrade.**
- **The Bank manages its counterparty credit risk through a framework of four primary mechanisms.**
- **Although total exposure has grown, the Bank's credit risk profile is dominated by AAA rated counterparties.**
- **A number of refinements are proposed to improve the Bank's counterparty credit risk management practices.**

28

• This section of the presentation has looked at the Bank's policies and strategies for managing counterparty credit risk. The highlights of this section can be summarized as follows:

- The Bank is exposed to counterparty credit risk through its investment portfolios and through the use of derivatives to manage its assets and liabilities. The Bank seeks to minimize the risk of financial or non-financial loss due to a counterparty default or rating downgrade.
- The Bank manages counterparty credit risk through a framework of approved counterparties, minimum credit rating standards, exposure limits, and risk mitigation measures.
- Over the last few years total counterparty exposure has grown in line with growth in the Bank's investment portfolios. Over the same period, the risk profile of this exposure has steadily improved as the share of AAA rated counterparties has grown from 30% to over 51%.
- Growth in overall counterparty credit exposure plus developments in the capital markets are providing a strong incentive to enhance the Bank's counterparty risk management framework. Refinements underway include introduction of CDS as a credit risk management tool, lowering the minimum rating for local currency operations & for counterparties with operational collateral exchange.

*In conclusion...*

- **In pursuit of its poverty alleviation and development mission, the Bank Group strives to minimize exposure to market risk.**
- **By maintaining its currency profile in line with the SDR, translation effects have been contained.**
- **The Bank's IRRM strategies have been effective, despite prepayments & market fluctuation. Prepayments have increased liquidity levels.**
- **Although exposure is very low, enhancements to the Bank's counterparty credit risk management framework are underway.**

29

- The highlights of this presentation can be summarized as follows:
- As a development finance institution, the Bank Group seeks to minimize its exposure to non-core sources of risk such as market risk. The Bank's exposure to market risk is managed under the ALCO control framework.
- The Bank seeks to protect the value of its risk capital and prevent budget over-runs from changes in currency exchange rates. The results show that most of the risk has been mitigated.
- The Bank seeks to protect its net interest margin from fluctuations in market interest rates. The results show that the Bank's net interest margin has benefited from the implementation of this strategy, which is helping to off-set some effects of the continued decline of market interest rates and the recent spike in loan prepayments.
- The Bank seeks to fully mitigate any risk of a liquidity shortfall. With liquidity comfortably above the prudential minimum, the risk of a liquidity shortfall is negligible.
- The Bank seeks to minimize counterparty credit risk. Although total exposure has gone up due to increased liquidity, the risk profile has improved. Further enhancements of the Bank's credit risk management framework are underway.