GREEN CLIMATE FUND

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26 September 2022

Policy to minimize the effect of currency fluctuations on the commitment authority of GCF

Summary

As per decision B.BM-2021/03, the Board requested the Secretariat to develop and present a policy to minimize the effect of currency fluctuations on the commitment authority of GCF.

A draft decision is presented for the Board's consideration and adoption in annex I and the policy proposal, in line with best practices among development financial institutions and the business model of GCF, is presented for the Board's consideration and approval in annex II.

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I. Introduction

1. The purpose of this policy to minimize the effect of currency fluctuations on the commitment authority of the Green Climate Fund ("GCF" or the "Fund") (the "Policy" hereafter) is to define how GCF manages the risk to which its commitment authority is exposed because of fluctuations in foreign currency exchange (FX) rates.

2. The commitment authority, or the level of resources currently available for funding decisions, refers to the total amount of actual cash in the GCF Trust Fund plus the promissory notes (PNs) deposited in a designated custody account, minus net funding commitments (cumulative funding approvals minus cash disbursed).

3. As part of its Funding Risk Policy (decision B.19/04, paragraph (a)(iii) and annex VI), GCF recognizes FX risk as the risk of incurring losses in the value of contributions due to FX rate fluctuations.

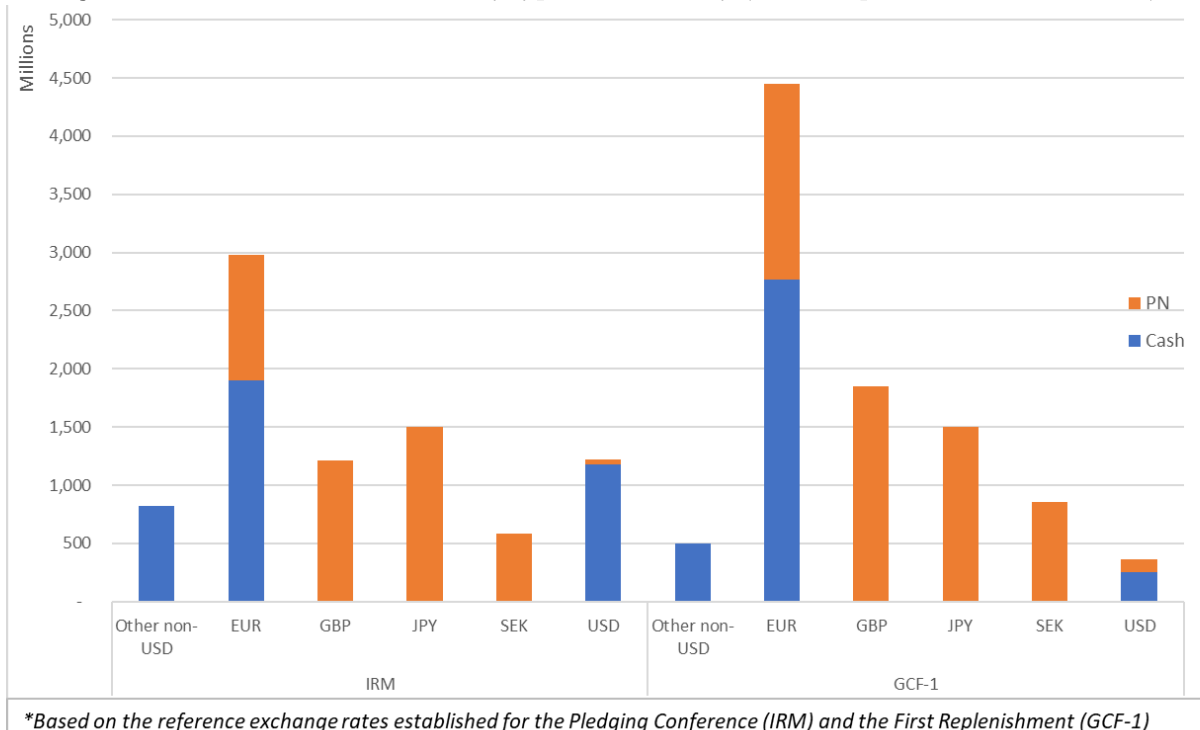
4. This policy document has been developed pursuant to decision B.33/02, parapragh (e), which requested that the Secretariat, following consultation with the Budget Committee, to present a policy to minimize the effect of currency fluctuations on the commitment authority of the Fund, based on the document contained in annex I to document GCF/B.33/Inf.16, for the Board's consideration at its thirty-fourth meeting.

II. Policy rationale

5. Due to the constantly changing nature of FX rates and the schedule of payments/encashments over several years, the USD equivalent value of the non-USD denominated contributions of the commitment authority will vary over time, resulting in increases or decreases in the USD equivalent of the commitment authority, to which the Fund is exposed. These variations may be substantial especially in periods of high FX rate variability and affect negatively or positively the amount of funds available that can be invested in the Fund's projects and programmes. Therefore, leaving FX risk unhedged could adversely affect GCF financial resources and confidence in its corporate planning.

6. The absence of a formal FX management policy leaves GCF exposed to potential adverse effects of currency movements particularly because a substantial portion of the contributions from the Fund's first replenishment is in the form of non-USD PNs, as was the case for the Fund's initial resource mobilization. As a matter of fact, due to their specific terms and conditions, PNs are subject to currency fluctuations (see paragraph 11).

Figure 1: Confirmed contributions by type and currency (in USD equivalent reference rate)

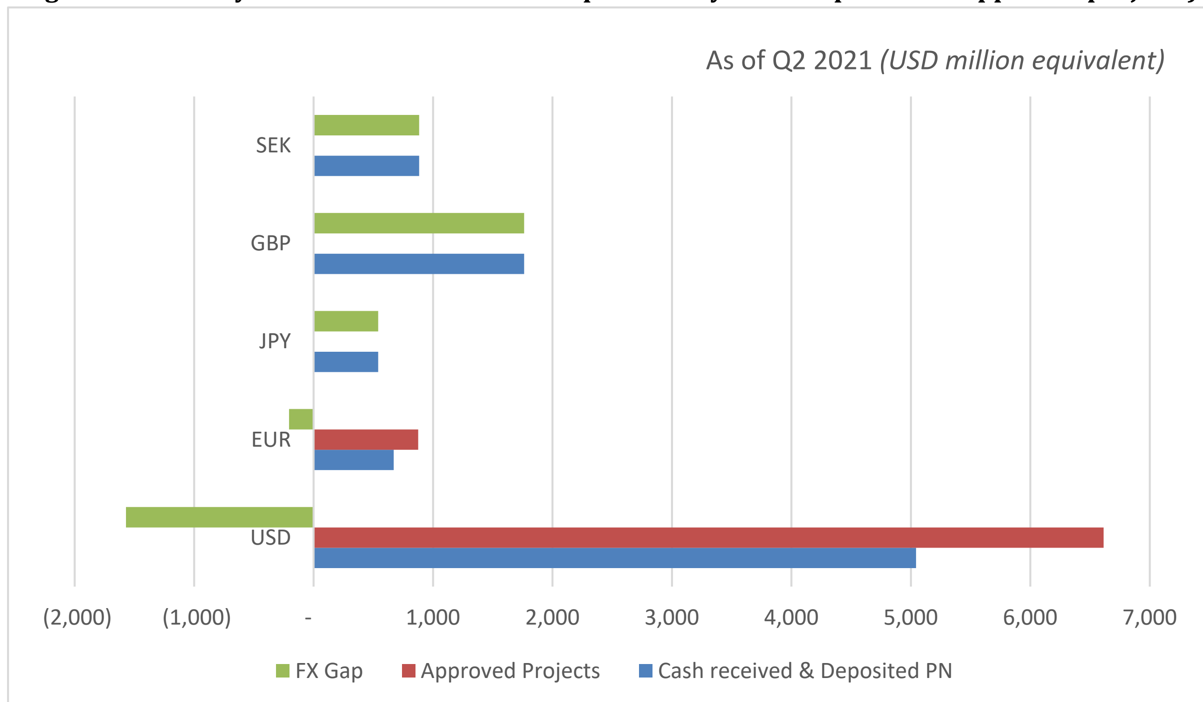


**Based on the reference exchange rates established for the Pledging Conference (IRM) and the First Replenishment (GCF-1)*

7. GCF functional[1] and presentation currency is USD. GCF expenditures and project financing are mostly in USD, with some in EUR. On the other hand, as per the GCF Policy for Contributions (annex I to decision B.24/02), contributors may make contributions in major freely convertible currencies including the GCF holding currencies (EUR, pounds sterling [GBP], yen [JPY], USD,). Although GCF receives some contributions in USD, a substantial proportion of the total contributions are denominated in non-USD currencies. The main currencies are EUR, GBP, JPY and Swedish krona (SEK). As a result, the USD equivalent value of the contributions denominated in non-USD currencies may vary over time, resulting in increases or decreases in the overall USD equivalent value of the commitment authority, to which the Fund is exposed.

[1]International Accounting Standard 21 (IAS 21) defines functional currency as "the currency of the primary economic environment in which the entity operates". The same Standard defines presentation currency as "the currency in which the financial statements are presented".

Figure 2: Currency mismatch: cash received + promissory notes deposited vs approved projects)



8. The objective of this Policy is to set out the approaches by which GCF will seek to manage its FX risk exposure to minimize the effect of currency fluctuations on the commitment authority of the Fund.

9. The commitment authority, or the level of resources currently available for funding decisions,[2] refers to the total amount of actual cash in the GCF Trust Fund plus the PNs deposited in a designated custody account, minus net funding commitments (cumulative funding approvals minus cash disbursed).

10. This Policy does not address the FX risk associated with the following exposures since they are not recognized in the commitment authority: (a) pledges and (b) contributions through cash not yet received and PNs not yet deposited under the signed agreements/arrangements.

11. The Secretariat can decide whether the non-USD contributions received should be converted to USD. In practice, upon receipt, a portion of non-USD cash may be held in holding currencies to maximize natural hedging. The remaining exposure is usually immediately converted into USD (to match the currency of approved projects) at the prevailing daily rate using FX spot transactions, thus neutralizing the effect of unwanted movements in exchange rates after the conversion date. The Secretariat recommends maintaining this FX hedging approach.

12. Non-USD PNs deposited are the main FX risk driver of the commitment authority of the Fund because:

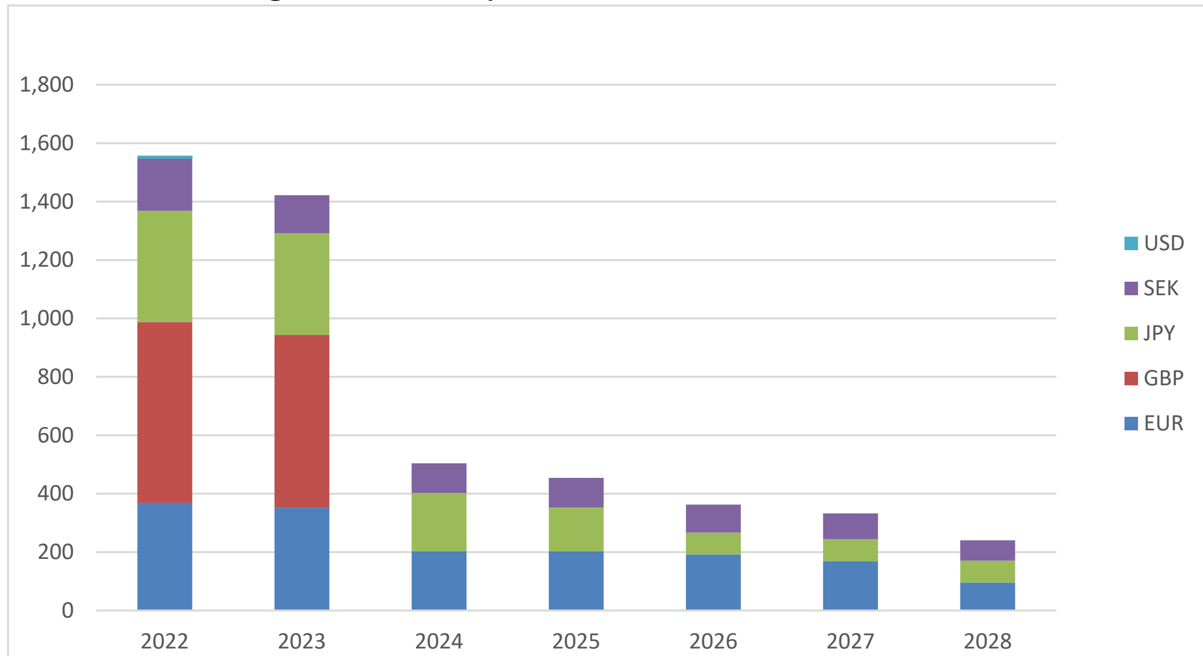
(a) They are exposed to FX risk until they are encashed and converted into USD; and

(b) Their encashment schedule usually runs over nine years, which may lead to significant swings in the actual value of each encashment.

[2] Funding decisions include Board decisions on funding proposals, the Readiness and Preparatory Support Programme, the Project Preparation Facility, accredited entity fees, the administrative budget (including for the Board, independent units, and Trustee) and the foreign exchange commitment risk buffer, minus the disbursed amounts.

As of November 2021, the outstanding amount (IRM + GCF-1) of PNs to be encashed (excluding PNs not yet deposited) from 2022 until 2028 is USD (equivalent) 4,872 million[3] of which 99.8 per cent is in non-USD denominated currencies. This does not include PNs not yet deposited.

Figure 3: Promissory note encashment schedule 2022-2028



13. To reduce the risk associated with exchange rate fluctuations on its commitment authority, GCF may perform hedging activities using financial instruments.

14. In formulating this Policy, the following key objectives were considered:

(a) Minimizing the effect of currency fluctuations on the commitment authority: By adopting an effective Policy, GCF can expect to maintain greater consistency and predictability and reduce the impact of unfavourable FX rates; and

(b) Identification and effective management of financial risks: As per component II of the GCF risk management framework, "overall risk appetite for FX risk is moderate". Effective risk management within the Policy requires all risks to be identified, quantified, assessed, and actively managed in accordance with prudent risk management policies and limits.

(c) Compliance with the Fund's financial risk governance:

(i) The Board will approve the Policy and authorize its implementation within the controls, authorization and reporting structures laid down in the Policy.

(ii) The RMC shall also monitor and review the FX risk management and internal control systems and the Secretariat's process of reviewing. If RMC is or has not been constituted, the functions of the RMC as specified in the Policy shall be discharged by the Board.

(iii) The Secretariat shall manage all implementation aspects of FX risk management. The Secretariat will be responsible for ensuring that clear objective measures of performance leverage off the Policy, and that appropriate hedging strategies

[3] Of which USD 986 million (equivalent) of PN deposited by the United Kingdom not yet encashed and theoretically due by end of 2023.

consistent with the Policy and transparent mechanisms for accountability and reporting are adopted. Key performance indicators (KPIs) could also be used to ensure that the Policy is being implemented as planned. For example, the relevant KPIs could include the gross FX exposure, net FX exposure (i.e. after hedging), cumulative FX revaluation impact to date, etc.

15. This Policy shall be a practical tool to meet actions set out in the Updated Strategic Plan for the Green Climate Fund: 2020–2023 (decision B.27/06) to "Ensure predictable management of commitment authority" (paragraph 32(b) of the Updated Strategic Plan).

16. Pursuant to the Board mandate set out in decision B.BM-2021/03, the scope of this Policy is limited to minimizing the effect of currency fluctuations on the commitment authority of GCF. Nonetheless, as the future operations of GCF are expected to become more and more diversified and sophisticated (e.g. local currency financing), mismatches between the financial profile of assets and liabilities—in terms of currencies denomination, maturities and interest rates, the potential financial risks to which the GCF will be exposed—will also increase. Therefore, the Secretariat, under the guidance of the RMC, may pre-emptively consider potential options for managing and mitigating such emerging financial risks, including supplementary hedging approaches and policies to address FX and interest rate risks.

III. Analysis of the policy proposal

3.1 Policy proposal

17. As set out in document GCF/B.27/18 titled "Initial analysis of options to minimize the effect of currency fluctuations on the commitment authority of the GCF", four available options detailed below have been considered:

(a) Option 1: Natural hedge;

(b) Option 2: FX commitment risk buffer;

(c) Option 3: Hedge in the FX market; and

(d) Option 4: Using EUR as accounting base currency.

18. The approach of GCF to managing FX risk shall first consider natural hedging to achieve the most cost-efficient hedging strategy. A natural hedge is when the currency of cash inflows can match with cash outflows to limit foreign exchange exposure. In principle, the Fund may disburse in its four holding currencies (EUR, GBP, JPY, USD,) and is already applying this option, using EUR and USD denominated contributions to respectively finance EUR and USD projects approved by the Board. Nevertheless, natural hedging remains limited because the anticipated disbursements under GCF projects/programmes and other GCF expenditures are mainly denominated in USD.

19. Using EUR as the accounting base currency instead of USD is not a sustainable option to minimize the effect of currency fluctuations on the commitment authority of GCF because:

(a) GCF uses the International Financial Reporting Standards (IFRS) as its accounting standard. As per International Accounting Standard 21, the functional currency is the currency of the primary economic environment in which the entity operates. Normally, it is the currency in which the entity makes and spends money. In the case of GCF, 37 per cent of the IRM and GCF-1 pledges were made in EUR. On the other hand, about 90 per cent and 10 per cent of the GCF approved funding to date is in USD and EUR, respectively. Given that the balance is tilted towards the USD, under the IFRS, GCF needs to maintain USD as the accounting currency. This matter could be revisited if the currency mix of the contributions and/or portfolio changes significantly during GCF-2.

(b) Converting all the receipts into EUR before making the disbursements would also lead to increasing operational costs and constraints, particularly with regard to unbalancing the natural hedge. The EUR investments currently generate negative interest and hence keeping the EUR will also negatively impact the investment income.

(c) GCF cash outflows are primarily and structurally in USD for projects and business plan expenditures. Moreover, the Fund does not anticipate the USD demand for programme funding to markedly decrease soon.

(d) It would not address the FX risk arising from non-EUR currencies.

20. In compliance with the Funding Risk Policy, GCF also holds an FX commitment risk buffer (August 2022: USD 320 million) to act as:

(a) A reserve to cover currency mismatch between the matched source of funds and the underlying committed investment; and

(b) A mitigant against the Fund solvency risk. Solvency risk refers to the Fund's inability to meet its financial commitments due to a shortfall in its available funds relative to its commitments.

21. Therefore, the purpose of this buffer is to address solvency risk and not to cover FX risk exposure on the commitment authority of the Fund. However, the FX commitment risk buffer will continue to be used, particularly to address the FX risk relating to the remaining currency exposures after implementing other recommended options referred to in the Policy.

22. Recognizing the shortcomings of the above options, the proposed solution to minimize the effect of currency fluctuations on the commitment authority of GCF, after applying natural hedging, is to make use of derivative financial instruments to hedge a portion of the net remaining exposure in non-USD currencies. At the time of hedging, FX derivatives will enable GCF to "lock in" the USD equivalent value of future PN encashments (usually up to three years forward), therefore ensuring greater stability and predictability of the value of the commitment authority, while retaining as much exposure to the FX rates as is compatible with the protection required. The Policy sets out the principles, roles and responsibilities applied to GCF hedging activity.

23. The proposed Policy addresses the following matters:

(a) The Secretariat's approach to managing FX risk is to first try to offset sources and uses of funds for a given currency to achieve the most cost-efficient hedging strategy (natural hedging). Only after optimizing the natural hedge will the resulting net position for a given currency be categorized as an FX exposure to be actively managed, including through the authorized FX hedging instruments in accordance with the Policy.

(b) The resultant net exposure due under contribution agreements shall be hedged as follows:

   (i) Cash contributions received: up to 100 per cent of the exposure arising upon receipt using FX spot contracts; and

   (ii) Deposited promissory notes: up to 75 per cent of the exposure arising in the next three years, having considered track record and expectations in the realization of contribution agreements, using FX forward and swap contracts. The Secretariat may start with a 50 per cent hedge ratio (ratio of the value of the proportion of a position that is hedged to the value of the entire position) to limit potential contingent costs and build up experience.

(c) The authorized FX hedging instruments are:

(i) FX spot contracts: the purchase or sale of a foreign currency for immediate delivery. This instrument is often used by the Secretariat to immediately convert one currency into another at the prevailing daily rate;

(ii) FX forward contracts: the purchase or sale of a foreign currency at a set date in the future. This instrument will be used when the Secretariat knows that it will need to convert one currency into another at a future date; and

(iii) FX swap contracts: the exchange of one currency for another now, with the exact opposite transaction defined in the future. This instrument may be used by the Secretariat for liquidity and bridging the gap when GCF has received funds earlier or later than the date of maturity of the FX forward contract.

24. The following guidelines will apply to the hedging activities of GCF:

(a) No speculative trading: Speculative trading refers to the act of conducting a financial transaction that has a high potential of gaining value but also a high risk of losing value. GCF does not undertake speculative positions on movements in FX rates. A hedging contract must only be executed to hedge an FX risk.

(b) Delegation of authority: The Secretariat will have the authority to execute and approve FX hedging within the constraints of the proposed Policy. The Secretariat may decide to outsource some or all parts of the execution and management of FX hedges (see section IV of this document).

(c) Derivative instruments are not designated for hedge accounting treatment and their fair value changes are not offset against fair value changes on the contributions' receivables. They are recorded on the balance sheet at the current mark-to-market (MTM), and monitored on a regular basis, and at least once a month. Mark-to-market is a method of measuring the fair value of a financial instrument based on current market price.

(d) By entering into FX hedging transactions, GCF becomes exposed to counterparty credit risk, which is the risk that the counterparty of a derivatives transaction defaults before the final settlement of the transaction's cash flows and the counterparty will not be able to fulfil present and future payment obligations. To manage counterparty credit risk, GCF may use several mechanisms, including netting agreements, diversification of counterparties, counterparty credit reviews, and collateralization.

(i) Counterparty credit risk shall be primarily mitigated by restricting GCF trading activities to counterparties with credit ratings that are at least investment grade. Credit assessment and evaluation for companies and governments is generally performed by a credit rating agency such as S&P Global, Moody's, or Fitch Ratings.

(ii) Netting is another effective tool to reduce this risk. GCF may undertake multiple trades with a counterparty—some will have a positive value (MTM gain) and some will have a negative value (MTM loss). By netting such positions, the loss can be reduced considerably, and counterparty risk can be reduced significantly. GCF must always enter into such netting agreements, for example, on standard International Swaps and Derivatives Association (ISDA) terms.

(iii) Collateralization also helps reduce counterparty credit risk and involves posting high-quality collateral such as cash or liquid securities, reducing net exposure. Posting collateral may also facilitate dealing with counterparties and is usually established two-ways and beneficial to both parties involved. However, it needs complex operational and contractual arrangements to be put in place and would decrease the commitment authority. Considering the pros and cons of collateralization as well as the accessibility of other tools to mitigate counterparty credit risk, the Secretariat recommends making hedging

arrangements with the banks that provide favourable conditions. Should prospective counterparties request collateral, GCF shall try to establish a pledge right on the cash owned by GCF instead of collateral delivery.

(iv) Diversification is another practical tool to reduce, if not eliminate, the risk. By trading with multiple counterparties, there will not be a single counterparty with significant exposure. To ensure adequate diversification, GCF shall establish counterparty limits.

(e) As stated in sub-paragraph (d)(iii) above, the Secretariat will reasonably try to avoid collateral posting when making FX hedging arrangements with counterparties. Nevertheless, the Secretariat advises that GCF always keep this option available as a risk mitigation tool and to enable unrestricted hedging capability. Therefore, to address the issue of sourcing collateral, the Secretariat has evaluated the following possibilities:

(i) Using the FX commitment risk buffer is not suitable considering the policy and operational impediments, such as modification of the purpose of the FX commitment risk buffer, no tangible consistency between the FX commitment risk buffer methodology and potential collateral needs, and significant amendments to the Funding Risk Policy.

(ii) Another option is setting up a specific collateral pool consisting of cash directly sourced from the commitment authority. These segregated funds would provide the necessary flexibility associated with collateral management. On one hand, having collateral posted will decrease the financial resources available for project financing but, on the other hand, the FX commitment risk buffer will also decrease simultaneously in a greater proportion since the collateral requirements are deemed to be much lower than the FX commitment risk buffer requirements. The size of the collateral will depend on the characteristics of the hedges undertaken (size, maturity, etc.), the volatility of the currencies being hedged and the terms of the ISDA Master Agreement. The trades subject to the collateral agreement are regularly marked-to-market and their net valuation is then agreed. The party with the negative MTM on the trade portfolio delivers collateral to the party with the positive MTM. As prices move and new deals are added, the valuation of the trade portfolio will change. Depending on what is agreed, the valuation is repeated at frequent intervals—typically daily under market practice. The collateral position is then adjusted to reflect the new valuation. The process continues unless one of the parties defaults. In terms of potential magnitudes for collateral movements, the MTM exposure is typically 1 to 3 per cent of notional principal amounts. Moreover, based on historical data (including the financial crisis of 2008) and the type of GCF transactions, a Value at Risk (VaR)[4] analysis shows that collateral requirement would be highly unlikely to exceed 20 per cent of the notional hedged amount. For example, if one considers that the maximum virtual hedge notional for GCF is around USD 1.0 billion (based upon the simulation detailed in appendix 3), the maximum collateral requirement may be between USD 150,000,000 and USD 200,000,000. This is an indicative estimation of what GCF could experience in extreme situations, that is, the worst 2.5 per cent of cases.

(f) Therefore, to address collateral requirements associated with derivative contracts—which, again, depend upon both parties willing to collateralize their exposure—the Secretariat proposes to create a specific collateral reserve consisting of cash. As long as GCF enters into hedging agreement without collateral calls, the amount of this reserve

[4] VaR is used as a measure of risk and aims to quantify the worst loss that might be expected over a given period of time, given a specified level of probability (known as confidence level).

will remain at zero. To cover any collateral contingencies associated with the launch of the hedging program, the Secretariat recommends setting aside and maintaining a collateral reserve amount of USD 50 million. This amount is deemed appropriate and commensurate with the factors described in paragraph 24 (e)(ii) and the regular and normal changes in the MTM of the projected derivatives portfolio. The collateral reserve will not be replenished each time funds from the reserve are used for the purposes of posting collateral. The Secretariat will monitor the adequacy of the collateral reserve against the collateral needs at regular intervals. The Secretariat can review and modify the collateral reserve amount over time, particularly when market volatility escalates and/or negative MTM deepens. Any required increase of the level of the collateral reserve (i.e. above USD 50 million) will be submitted to the Board for approval. The cash held within the reserve will be transferred to the receiving party, as when required under the collateral agreement. The funds may be withdrawn from the reserve once the transactions have terminated, or when the total amount is considered no longer appropriate by the Secretariat First Level (Chief Financial Officer) in agreement with the Second Level (Office of Risk Management and Compliance [ORMC]), or if GCF no longer holds any contracts with collateral calls. The Secretariat will monitor regularly and report quarterly the level of the collateral reserve to the RMC, the Board, etc. The Secretariat will closely monitor the risk of large negative MTM of GCF derivative positions and may close out some of the derivative positions, as necessary. The Secretariat may develop internal collateral management guidelines including the collateral reserve requirements.

(g) Since the FX hedging instruments purchased to implement the hedges will be aligned with the payment schedules of PNs, occurrences of non-payment may result in hedging transactions being terminated early. There may be a “breakage cost” or gain for GCF depending on how the prevailing forward rate has changed. At the time of entry into an FX transaction, the size of these breakage costs or gains on early termination cannot be predicted, as forward rates can increase as well as decrease by an unpredictable amount. As an estimate based on historical volatility, the breakage loss/gain to GCF could be anywhere between +/- USD 5,000,000 and +/- USD 10,000,000 for a USD equivalent 100 million contract.

(h) To cover the potential losses or gains of early termination of hedging transactions, the investment income earned on undisbursed cash balance of GCF that is held with the Trustee will be used. In a highly unlikely scenario where investment income earned is not sufficient to cover potential loss, the liquid asset portfolio[5] may be used.

(i) The intention is for the FX hedging transactions to be documented using standard form agreements published by ISDA. The 2002 ISDA Master Agreement provides for the waiver of immunities by allowing each party to agree to waive any immunity held by it to the extent permitted under applicable laws. In this regard, paragraph 8 of the Fund’s Governing Instrument states that “The Fund will enjoy such privileges and immunities as are necessary for the fulfilment of its purposes”.

(j) In addition, Article 9(1) of the Headquarters Agreement states that “The Fund and the Property of the Fund, wherever located and by whomsoever held, shall enjoy immunity from any form of legal process, including search, requisition, confiscation, foreclosure, seizure, all forms of attachment, injunction and expropriation whether by executive, administrative, judicial or legislative action, except as provided in this Article and insofar as in any particular case the Fund expressly has waived its immunity in writing. It is, however, understood that no such waiver of immunity shall extend to any measure of execution.”

[5] The liquid asset portfolio is defined as securities, cash or cash equivalents held in trust or in GCF bank accounts.

(k) If the Fund agrees to the waiver provisions in the ISDA Master Agreement, this would constitute a "particular case [where] the Fund expressly has waived its immunity in writing" under Article 9(1) of the Headquarters Agreement, whereby the Fund would waive all immunity. However, pursuant to Article 9(1) of the Headquarters Agreement and the laws of the Republic of Korea, such waiver would not be effective in respect of any measure of execution. Since the Fund would still have immunity in respect of any measure of execution under the laws of the Republic of Korea, the national authorities, including the national courts, could not force GCF to use its assets in Korea to satisfy the debts of the Fund owed to a hedge counterparty. Consequently, the limited practical value of this waiver may affect the counterparty's assessment of the risks relating to hedging transactions with the Fund and, as a consequence of the risk outlined above, a counterparty may pursue alternative methods of mitigating this risk when entering into FX hedging transactions with the Fund, which may involve higher pricing for the Fund and/or require the Fund to post collateral outside of Korea.

(l) The RMC will receive a quarterly Hedge Report from the Secretariat. The Hedge Report shall summarize the total hedging in place by counterparty (including the expiry date profile of the hedge book), the MTM position of that hedging, and any new hedging undertaken since the last report. The Board will receive the Hedge Report through the quarterly Risk Dashboard.

3.2 Policy impact

25. To improve GCF predictability of funding when it approves a project, GCF shall apply FX hedging to reduce the impact of unfavourable foreign exchange movements.

26. Currently, not hedging the deposited PNs involves accumulating reserves via the FX commitment risk buffer, which has substantial opportunity costs by depleting resources available for project funding and limiting GCF support to developing countries' ambitions towards low-emission, climate-resilient pathways. For a USD equivalent 100 million hedge, the FX commitment risk buffer requirement would decrease by 20 million (as set per the current Funding Risk Policy).

27. On the other hand, hedging may result in an opportunity cost or gain for GCF in terms of the level of resources currently available for funding decisions. The opportunity cost of hedging with a forward contract can be measured as the FX gains foregone by locking in the exchange rate in advance. For a USD equivalent 100 million hedge, the sensitivity to ±100bps fluctuation of the FX rate between the FX forward rate and the spot rate at the time of encashment is ±1 million.

28. A backtesting[6] of hedging trades in line with the proposed Policy has shown that the available resources of GCF would have been USD 51 million higher for an estimated transaction cost of USD 1.5 million. Over the same period, the actual FX buffer reached USD 170 million (whereas the required risk buffer amount increased to USD 327.5 million).

[6] Excluding GBP contributions as they have not been encashed to date

Hedged Currencies	Number of trades	Average Trade Size USD equiv. Million	% of hedged amount
EUR	12	90	37%
JPY	7	173	42%
SEK	9	67	21%
Total/Average	28	110	100%

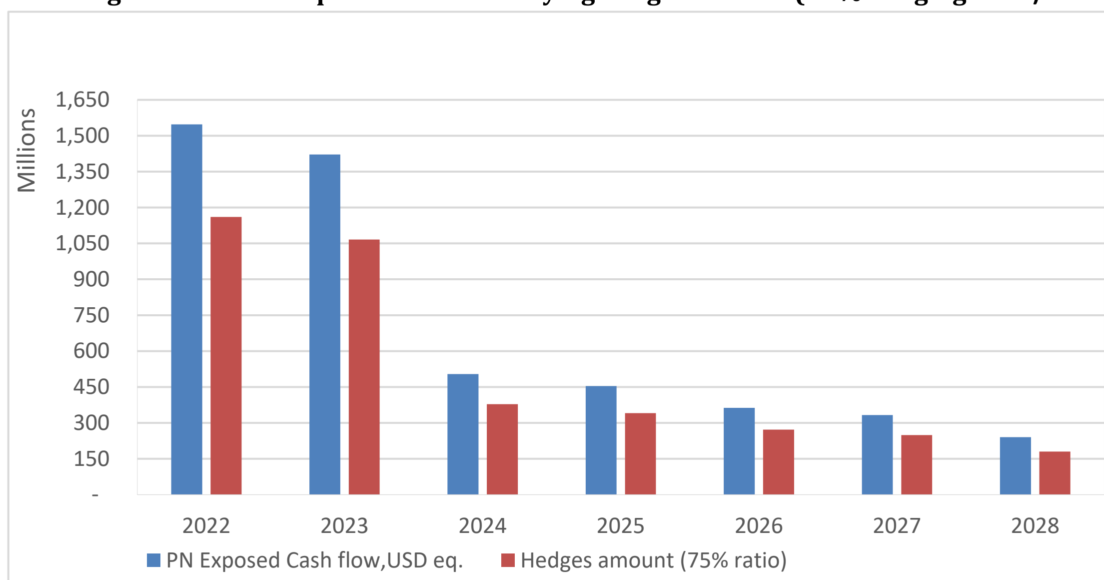
USD equiv. million	Value at FX ref. rate	Value at FX encashment date	Locked-in value with hedge
Total	3,151	2,847	2,898
EUR	1,182	1,053	1,084
JPY	1,301	1,239	1,209
SEK	667	553	604

- Period considered: PN schedule 2015- Q1 2021
- A forward contract is executed 2 years before the encashment date by selling the currency PN and buying USD.
- Assumptions: all PN to be received during a quarter are assumed to be received at the end of the quarter.
- Under this hedging strategy, the total value of PN encashed (2.898M) would have been USD equiv. 51 million higher than the realized encashment value (2.847M)
- Transaction costs and cash collateral requirements may vary depending on the structure of the hedge and counterparty

29. As a theoretical simulation exercise based on 1 November 2021, the potential exposure[7] from PNs to be hedged from 2022 until 2028 would be between USD 1,547 Million and USD 241 million each year. Should a 75 per cent hedging ratio be applied (before applying any adjustment such as natural hedging or contributors' track record), then the hedged amounts would be between USD 1,161 million and USD 180 million each year. It is worth noting that these USD equivalent amounts may vary over time due to currency fluctuations and replenishment efforts. Moreover, the Secretariat does not expect to be able to hedge any of the 2022 exposure due to the time required for implementing the Policy.

30. Overall, the cost-benefit analysis shows that once the hedging is in place, it would result in lowering the amount of the FX commitment risk buffer because the hedged portion of non-USD PN encashments will no longer be subject to FX risk. For a USD equivalent 100 million hedge, the FX commitment risk buffer requirement would decrease by 20 million (as set per the current Funding Risk Policy). The hedging arrangement would require an estimated USD 50 million of collateral reserve to be set aside. The annual total transaction and outsourcing fees are estimated at USD 500,000.

Figure 4: PNs FX exposure and underlying hedges amount (75% hedging ratio)



[7] If the PN from the United Kingdom of GBP 447,360 million, which is not yet encashed, are equally encashed in 2022 and 2023.

31. As a result of this Policy, GCF shall benefit from:

(a) Reducing volatility of the actual value of the commitment authority;

(b) Controlling FX exposures consistent with the GCF risk appetite statement, particularly, "the overall FX risk appetite for FX risk is moderate";

(c) Reducing exposure to potential decreases in the value of future PN encashment due to exchange rate fluctuations; and

(d) Lowering the amount of the FX commitment risk buffer because the hedged portion of non-USD PN encashments will no longer be subject to FX risk and match the currency of the investment commitments (see paragraph 25).

(e) The potential risks associated with this Policy are:

(f) The exposure to risks associated with derivatives contracts such as counterparty credit risk, market risk, and operational risk; and

(g) The risk of non-encashment of PNs by contributors, causing the premature termination of a derivative contract and resulting in a loss.

(h) If GCF is required to post collaterals as part of hedging arrangements, some savings made on the FX commitment risk buffer may be partially offset by the collateral reserve.

32. Although the purpose of the proposed Policy is to only address the FX risk associated with the commitment authority of GCF, it is also recommended to authorize the Secretariat to explore further opportunities for managing and mitigating other emerging financial risks such as FX risk and interest rate risk on all other transactions (such as reflows of funds) in relation to the mix of GCF assets and liabilities.

IV. Operational impact assessment and implementation arrangements

33. This Policy has real or prospective linkages with the following items:

(a) Initial Risk Management Framework and adoption of a risk register (decision B.12/34);

(b) GCF Risk Management Framework (decision B.17/11);

(c) GCF Risk Management Framework (decision B.19/04); and

(d) Policy for contributions (decision B.24/02).

34. Effectiveness of this policy requires that FX risk and exposure can be identified, quantified, assessed and actively managed in accordance with prudent risk management policies and limits in a timely manner.

35. Effective execution and management of FX hedging transactions necessitates many steps and appropriate systems including negotiation of hedging agreements, trade execution/confirmation/settlement, regular MTM and reporting as well as a trading platform and a treasury management system.

36. The Secretariat has examined how best to implement the GCF FX hedging program, including best execution, price discovery, and operational efficiency (see comparative analysis in appendix 2).

37. There are two approaches for running an FX hedging program:

(a) Direct: all front/middle/back-office activities associated with FX hedging are performed internally by the Secretariat; and

(b) Indirect: all or part of front/middle/back-office activities associated with FX hedging are delegated to a third party. As third party, the Secretariat has identified two alternatives:

(i) Outsourcing to the GCF Trustee; and

(ii) Outsourcing to an external partner.

38. It is expected that the Secretariat will have very little (half a dozen trades per year but potentially substantial in size) and plain vanilla FX hedging activity. A simple in-house operation might suffice without a large amount of overhead, staff, and fixed costs. However, for now, the Secretariat is of the opinion that it is not equipped for an effective and compliant direct FX hedging program, particularly considering the resources, IT infrastructure, and governance required.

39. In an outsourced arrangement, tasks and systems (as described in paragraph 29) are assumed by the provider which, in consultation with GCF, can build a customized solution across the life cycle. By outsourcing its FX hedging operations, the Secretariat would particularly benefit from mitigation of operational risk, increased efficiency, and specialist tools.

40. The preferred outsourcing solution would be to work together with the Trustee. Currently, the Trustee only uses and offers FX spot to convert non-USD denominated cash payments as they are received. However, the Trustee has confirmed that it is unable to offer any derivatives products (FX forward, FX swaps) or services (front/middle/back office) for now. The Trustee could not yet confirm whether it would offer FX outsourcing solutions in the near future and what could be their level of services and requirements.

41. Therefore, the Secretariat advises that FX hedging be executed and managed through an external third-party provider. The choice of the strategic partner will be done be through a selective screening process, including the best execution model for GCF, that is, agency-based[8] or principal-based (see comparative analysis in appendix 2). A dozen commercial banks and FX solution providers (based in the United States, Asia, and Europe) have already expressed their interest to become counterparties to GCF, in a capacity or another, and presented their services, requirements, and indicative pricing. Given the liability risks associated with agency contracts, any decision to enter into such contracts is subject to a detailed review of the legal structure and documents proposed to give effect to the structure.

42. Subject to the outcome of the selective screening process, the Secretariat intends to appoint at least one hedging bank/hedging counterparty that must, amongst other things:

(a) have a strong investment grade credit rating from a recognized credit ratings agency (S&P or Moody's); and

(b) have strong execution capacity.

43. To strengthen financial governance, the Secretariat shall establish appropriate structures, which will include a committee (e.g. Asset and Liability Committee) to identify, manage and control GCF FX hedging activity as well as other related financial risks.

44. As a Second Level, the ORMC may make recommendations in accordance with the Risk Management Framework. The Office of the General Counsel will review the relevant legal documents including ISDA agreements and collateral agreements when applicable. The Secretariat may engage external counsel to advise GCF on the terms of the relevant legal documentation.

[8] Agency model: the bank acts as a broker for GCF, finding another market participant or multiple participants to take the other side of the trade but without taking on principal risk themselves.
Principal model: the bank acts as a principal counterparty, executing the trade with GCF itself and taking on the risk, which it could then warehouse or lay off via another trade.

V. Budgetary implications

45. The aggregated cost of FX hedging using derivatives instruments is determined by the following components:

(a) Direct costs (i.e. measuring transaction costs relative to market prices), which are driven by many factors, including size (notional), tenor, currency pairs, payment frequency, company credit quality, and regulatory requirements; and

(b) Indirect costs associated with staffing, tools, and external legal expertise.

46. The Secretariat has evaluated and compared the indirect cost of each option as follows (only includes tasks and systems that could be implemented in-house, hence excluding legal fees, which in both options need to be outsourced; see paragraph 46 for details):

(a) In-house: fixed annual cost between USD 50,000 and USD 70,000; and

(b) Outsourced: between 7 and 10 bps[9] of the total hedged amount, for example, per USD 100 million hedged equal between USD 70,000 and USD 100,000.

47. The estimated costs of outsourcing FX hedging are substantially higher than the in-house alternative (see appendix 3 for a detailed comparison). As a matter of fact, as the hedged portfolio grows, it is expected that the cost difference will increase. As a guide, a USD 500 million trade would cost:

(a) In-house: between USD 50,000 and USD 70,000; and

(b) Outsourced: between USD 350,000 and USD 500,000.

48. Whether FX hedging is in-house or outsourced, some activities will still need to be performed by the Secretariat, such as pre-trade preparation, exposure management, accounting and limits monitoring (to some extent). As a rough estimate, the cost to GCF of engaging external counsel for pre-trade preparation and documentation with one counterparty and for reviewing and negotiating the services agreement with an external FX provider is estimated between USD 40,000 and USD 60,000. These amounts are only rough estimates and are subject to change depending on the exact services provided by external counsel.

49. As the Secretariat will be looking to enter into hedging contracts with at least one counterparty, once a negotiation with one counterparty has been completed, the costs are expected to be lower for any new negotiation with another counterparty in relation to the preparation of the initial drafts of the documents to be entered into with subsequent counterparties.

50. Direct costs are expected to be between 2 and 10 bps based on a preliminary survey conducted with commercial banks. These costs may also vary depending on whether (a) the execution is outsourced or not, and (b) the outsourced execution model is agency or principal dealing.

51. The Secretariat anticipates that over the next five years the average cost of hedging[10] per year will be as shown in table 1 below (see appendix 3 for more details):

Table 1: Breakdown of hedging costs

[9] Basis points also known as "bps" are simplified units of measure that express percentages in finance. One basis point is equivalent to 0.01 per cent. For instance, 7 bps applied to USD 100,000,000 equal USD 70,000.
[10] Based on data collected with potential suppliers and counterparties, current financial market conditions, primary assessment of GCF as a counterparty, hedging ratio of 66 per cent and assuming no collateral posting.

Hedged amount (Average/Year) (USD)	Legal costs (One-off)[11] (USD)	Direct transaction costs (Average/Year) (USD)	Outsourcing services costs (Average/Year) (USD)
$300,000,000	$40,000 – $60,000	$60,000 – $300,000	$200,000 – $300,000

52. The above projected costs may substantially vary from one year to another considering the scheduled encashments and depending on the total amount hedged. They also only include existing contribution agreements.

53. The outsourcing services and legal costs (both indirect costs as defined in V.45(b)) will be funded from the Secretariat's administrative budget. As described in paragraph V.45(a), FX forward transaction costs are driven by many factors and usually implicit and included in the final price of each trade, that is, markup GCF will pay above the market price of the derivative itself. Direct transaction costs (as defined in V.45(a)) will not generate expenses per se and there is no required budget. The delivery of this Policy will be covered from the existing headcount approval.

54. For 2022, the Secretariat has assessed that a budget of USD 85,000 is needed to cover the legal fees (negotiation of hedging agreements) and outsourced services fees.[12] It is assumed that the first hedges will be initiated during the last quarter of 2022 for approximately USD 300–400 million notional to cover exposure arising in 2023. Therefore, the costs of outsourcing services will be borne for one quarter only in 2022. For 2023, the Secretariat anticipates a budget of USD 500,000. Considering the prerequisite steps (e.g. selection of hedging counterparty, negotiation of legal agreements) and due timeframe before executing hedging transactions, the Secretariat proposes that an overall budget of USD 585,000 covering both 2022 and 2023 be approved, thereby ensuring flexible and best implementation of the Policy.

VI. Monitoring and review

55. The Secretariat will perform ongoing monitoring of the implementation of this Policy and inform the RMC of any emerging challenges. If RMC is or has not been constituted, the functions of the RMC as specified in the Policy shall be discharged by the Board.

56. The RMC may make recommendations on this Policy and report to the Board if a review is needed based on operating experience.

57. In addition to the annual monitoring and reporting, the Policy may also be assessed as part of the overall policy review to be conducted by the Board in the Board work plan under each replenishment cycle.

58. The Secretariat will prepare a quarterly FX report including the total hedging in place by counterparty, the MTM position of that hedging, any new hedging undertaken since the last report, and actual hedging ratio by currency.

VII. Recommended action by the Board

[11] Only if GCF trades all contracts with the same counterparty. Should GCF deal with more than one counterparty, additional legal costs will be incurred as described in paragraph 49.

[12] An estimated legal cost breakdown of USD 85,000: USD 25,000 for the first transaction, which also assumes the legal costs of entering an ISDA Master Agreement; ISDA documentation; plus around USD 20,000 for each subsequent hedging transaction.

59. It is recommended that the Board adopt the draft decision set out in annex I to this document.

Annex I: Draft decision of the Board

The Board, having considered document GCF/B.34/13 titled "Policy to minimize the effect of currency fluctuations on the commitment authority of GCF":

(a) *Takes note* of the information presented in document GCF/B.34/xx titled "Policy to minimize the effect of currency fluctuations on the commitment authority of GCF";

(b) *Adopts* the Policy to minimize the effect of currency fluctuations on the commitment authority of GCF (the "Policy") as set out in annex II to this document;

(c) *Approves* an additional administrative budget of USD 585,000 that might be used in 2022 and 2023 as necessary to implement this Policy, including for legal and outsourcing services and fees, and *requests* the Secretariat to include the budget necessary to implement this Policy in future annual budget requests;

(d) *Approves,* effective from 1 January 2023, the establishment of collateral reserve and the set-aside of USD 50 million for the provision of this reserve, as necessary to cover potential collateral requirements associated with the implementation of this Policy; and

(e) *Requests* the Secretariat, in consultation with the Budget Committee with respect to any related budgetary implications, to explore the mitigation of the wider emerging financial risks outlined in section II of document GCF/B.34/XX and to present to the Board any recommended action for its consideration.

(f) *Decides* that if at any time the risk management committee (RMC) is or has not been constituted, the functions of the RMC as specified in the Policy shall be discharged by the Board, except the approval of counterparty limits pursuant to paragraph 6(a)(iii) of the Policy, which shall be approved by the Executive Director.

Annex II: Policy to minimize the effect of currency fluctuations on the commitment authority of GCF

I. Objective

1. The objective of this Policy to minimize the effect of currency fluctuations on the commitment authority of GCF (hereinafter "Policy") is to set out the approaches by which GCF will seek to manage its foreign exchange (FX) risk exposure to minimize the effect of currency fluctuations on the commitment authority of GCF.

II. Scope

2. This Policy shall apply to non-United States dollar denominated contributions of the commitment authority of GCF as directly deposited cash and deposited promissory notes which are not yet encashed.

III. Definitions

3. For the purposes of this Policy, the following definitions of terms shall apply:

(a) **FX** means foreign exchange;

(b) **ISDA** Master **Agreement** means International Swaps and Derivatives Association (ISDA) Master Agreement;

(c) **MtM** means mark-to-market;

(d) **NPV** means net present value.

IV. Hedging principles and application

4. **Exposures to be hedged**

(a) Currency hedges may be used to protect the United States dollar (USD) value of both non-USD denominated contributions paid in cash and those deposited as promissory notes not yet encashed.

(b) Natural hedges resulting from the existence of inflows and outflows in the same currency that reduces net exposure shall be considered before using FX hedging instruments.

(c) The resultant net exposure due under contribution agreements shall be hedged as follows:

(i) Cash contributions received: up to 100 per cent of the exposure arising upon receipt using FX spot contracts; and

(ii) Deposited promissory notes: up to 75 per cent of the exposure arising in the next three years, having considered track record and expectations in the realization of contribution agreements, using FX forward and swap contracts.

(d) The Secretariat shall evaluate at least once per month the GCF commitment authority exposure to FX fluctuations. Hedges shall be executed as soon as is practicable and within one month of the evaluation, having regard to short-term FX market conditions.

(e) GCF expressly prohibits the use of derivative instruments for speculative purposes and hedging contracts shall only be executed to hedge the foreign exchange risk of an underlying foreign currency transaction.

5. **Foreign exchange hedging instruments**

(a) The Secretariat is authorized to use to the following FX hedging instruments only:

(i) FX spot contract – the purchase or sale of a foreign currency for immediate delivery. This instrument is often used by the Secretariat to immediately convert one currency into another at the prevailing daily rate;

(ii) FX forward contract – a commitment to purchase or deliver a specified quantity of currency on a designated date in the future for a price determined when the contract is transacted. This instrument will be used when the Secretariat knows that it will need to convert one currency into another at a future date; and

(iii) FX swap contract – an agreement to simultaneously borrow one currency and lend another at an initial date, then exchanging the amounts at maturity. This instrument may be used by the Secretariat for liquidity and bridging the gap when GCF has received funds earlier or later than the date of maturity of the FX forward contract.

6. **Counterparties**

(a) Counterparties suitable for selection by GCF shall have:

(i) For longer-term hedge exposures, a long-term unsecured credit rating of BBB- or above from at least two credit rating agencies (Standard & Poor's or equivalent Fitch or Moody's rating); and

(ii) For short-term (less than one year), hedge exposures, a short-term unsecured credit rating of A3 or above from at least two credit rating agencies (Standard & Poor's or equivalent Fitch or Moody's rating).

(iii) Counterparty limits to mitigate the credit risk shall be developed in collaboration between the First Level (Chief Financial Officer) and the Second level (Office of Risk Management and Compliance)[1] and approved by the Risk Management Committee (RMC).

(b) All hedges shall be transacted under a mutually acceptable ISDA Master Agreement or other market standard FX hedging agreement which shall provide for disputes to be resolved through arbitration only.

(c) Should GCF be required to post collateral, it shall try to establish a pledge of collateral[2] instead of collateral delivered as an outright transfer of title.

7. **Collateral posting and early termination**

(a) A collateral reserve shall be set aside to provide for posting collateral as and when needed.

(b) The collateral reserve amount shall be USD 50 million.

(c) The collateral reserve shall be funded out of GCF's commitment authority.

(d) The collateral reserve shall not be replenished each time funds from the reserve are used for the purposes of posting collateral.

[1] Funding Risk Policy (decision B.19/04, paragraph (a) (iii) and annex VI)
[2] A pledge of collateral ensures that the pledgor does not lose ownership or possession of the pledged collateral.

(e) Any increase of the level of the collateral reserve shall be submitted to the Board for approval.

(f) Funds held within the reserve shall be transferred to the receiving party, as and when required under the collateral agreement.

(g) Funds returned to the GCF account shall be kept within the collateral reserve.

(h) The funds allocated to the collateral reserve may be withdrawn:

(i) Once the transactions have terminated; or

(ii) When the total reserve amount is considered no longer appropriate by the Secretariat First Level (Chief Financial Officer) in agreement with the Second Level (Office of Risk Management and Compliance); or

(iii) If GCF no longer holds any contracts with collateral calls.

(i) The Secretariat shall monitor regularly and report quarterly the level of the collateral reserve to the RMC, the Board and other relevant entities.

(j) If supplementary funds must be paid into the collateral reserve, the Secretariat shall replenish it after approval from the the Board.

(k) The investment income earned on the GCF undisbursed cash balance held with the Trustee shall cover potential breakage loss/gain associated with early termination of contracts. In case of shortfall, the liquid asset portfolio[3] shall be used.

8. **Roles and responsibilities**

(a) In accordance with the GCF risk management framework (decision B.19/04), the Chief Financial Officer is the primary owner and manager of FX risk.

9. **Hedging reporting**

(a) The Secretariat shall implement the appropriate internal controls and reporting for ensuring the safe and sound conduct of currency hedging activities. A quarterly Treasury Dashboard shall be implemented, which shall include portfolio information such as exposures, FX rates, counterparty exposures, pledges and contributions for monitoring purposes. The Board will receive a Hedge Report to be included in the current Risk Dashboard.

V. Implementation arrangements

10. The Secretariat shall review FX exposures monthly and shall be authorized to carry out currency conversions and hedges in accordance with the provisions of the Policy. The Executive Director or his/her designee shall be authorized to negotiate and enter into legal agreements on behalf of GCF to give effect to this Policy.

11. The Secretariat shall prepare a quarterly FX report for the RMC and Board review.

12. This Policy shall be effective from the date of the Board decision adopting the Policy.

13. The Secretariat shall be authorized to implement this Policy and decide upon the best execution model for entering into FX hedging transactions, which may include outsourcing certain functions relating to trade execution and administration.

[3] The liquid asset portfolio is defined as securities, cash or cash equivalents held in trust or in GCF's bank accounts.

VI. Monitoring and review

14. The Secretariat shall perform ongoing monitoring of the implementation of this Policy and shall inform the RMC of any emerging challenges.

15. The RMC, or the Secretariat, may make recommendations on this Policy and report to the Board if it is deemed that a review is needed based on operating experience.

16. In addition to the annual monitoring and reporting, the policy may also be assessed as part of the overall policy review to be conducted by the Board in the Board workplan under each replenishment cycle.

Annex III: Background documents

Appendix 1: Comparative analysis of foreign exchange hedging practices by other institutions

Appendix 2: Comparative analysis of foreign exchange hedging execution models: in-house versus outsourced

Appendix 3: Comparative analysis of estimated all-in cost of foreign exchange hedging with one counterparty

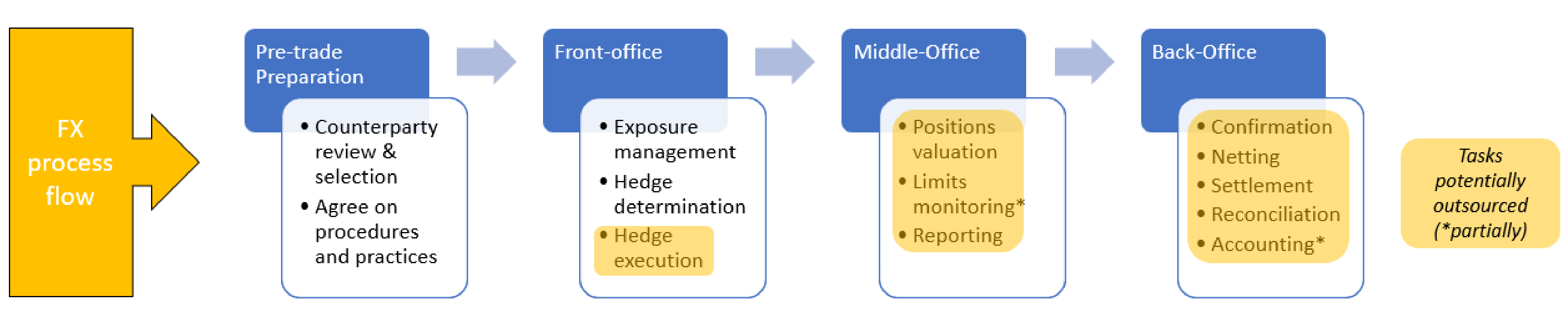
Appendix 1: Comparative analysis of foreign exchange hedging practices by other institutions

	GAVI	GLOBAL FUND	IFAD
EXPOSURES TO BE HEDGED	• Inflows due under contribution agreements: Between 75% and 100% of the exposure arising in the two years following the evaluation, having regard to prior experience and where such certainty does exist in the conversion of contribution agreements to cash. • Inflows expected from announced pledges: Between 50% and 100% of the exposure arising in the year following the evaluation and between 50% and 100% in the following year, subject to visibility on the amount and timing of inflows and having regard to prior experience and expectations in the conversion of pledges to contribution agreements. • Programme expenditure (non-US dollar): Between 50% and 100% of the exposure arising in the two years following the evaluation, having regarded to the degree of confidence with which the cash flow amounts can be estimated. • Partners' engagement framework/Gavi Secretariat: Between 50% and 100% of the exposure from expenditure budgeted for the current calendar year, and for the	• Active hedging with levels of 50 to 100 through approved financial instruments. • A minimum of 75% of on balance sheet exposures (contributions and commitments) should be hedged. • A minimum of 50% of off-balance sheet exposures to reduce the economic risk upon the receipt of a pledge, allocation of available sources of funds, and signature of grant agreements. These exposures include uncommitted pledges, allocated amounts, contingent liabilities, and operational budget over a three-year allocation period in currencies other than United States dollars giving risk to economic risk overall. • Discount factor on donor contributions / on grants and other uses of funds / any other uncertainty factor.	The International Fund for Agricultural Development (IFAD) manages the currency risk that results from any mismatch between the currency composition of its assets and the currency composition of its future commitments. The risk is managed by monitoring any mismatches and implementing a realignment strategy if any deviations become significant. The Fund's Investment Guidelines authorize the use of the following types of derivative instruments, primarily to ensure alignment to the currency composition of IFAD's commitments.

	GAVI	GLOBAL FUND	IFAD
	next calendar year once budget estimates have been compiled for that year.		
HEDGING INSTRUMENTS	• Foreign exchange (FX) forward contracts • FX option contracts	• FX forward contracts - often used when the Secretariat knows that it will need to convert one currency into another at a future date. • Foreign exchange swap contracts - often used by the Secretariat for liquidity and bridging the gap when the Global Fund has received funds earlier or later than the date of maturity of the foreign exchange forward contract.	• Currency forwards • Exchange-traded futures and options • Cross currency swaps
COUNTERPARTIES	• Not less than A or A2 as measured by at least two major credit rating agencies. • The maximum exposure with any single bank shall be 10% of the short-term portfolio or USD 250 million (or equivalent in other currencies), whichever is higher.	• Minimum rating of A- • Counterparty limit framework including concentration l	Counterparty must have a minimum credit rating of A- (S&P) or A- (Fitch) or A3 (Moody's)
CURRENT POSITION	As of May 2020, Gavi had hedged 75% of the non-USD direct contributions (pounds sterling, euros, Norwegian kroner, etc.) that it expects to receive in 2020.	As of December 2020, hedged currencies included euros, pounds sterling, Swedish kronor, Swiss francs, etc., and the underlying hedging ratio was between 76% and 97% for each currency.	

Appendix 2: Comparative analysis of foreign exchange hedging execution models: in-house versus outsourced

Overview of the foreign exchange (FX) hedging workflow



Comparative analysis of each execution model (Agency/Principal/In-house) by risk type (counterparty, market, operational) and other factors

Overview of the risk types and other key factors

✓ *Pros* / ✗ *Cons*

	Outsourcing to the Trustee	Outsourcing to an external partner		Direct execution (in-house)
		Principal execution model[1]	Agency execution model[2]	
Counterparty credit risk	✓ Very low considering the strong credit rating AAA	Single counterparty trading Concentration risk as: "all eggs in one basket". If the credit worthiness of the FX provider deteriorates or the relationship terminates, GCF may be	✓ Single and multi-counterparty trading. GCF may direct Agent to trade with the FX	✓ Single and multi-counterparty trading. GCF select the FX counterparty(ies) of its choice ✓ GCF sets limits against each counterparty

[1] Principal model: the bank acts as a principal counterparty executing the trade with GCF itself, taking on the risk, which it could then warehouse or lay off via another trade

[2] Agency model: the bank acts as a broker for GCF, finding another market participant or multiple participants to take the other side of the trade but, without taking on principal risk themselves.

	Outsourcing to the Trustee	Outsourcing to an external partner		Direct execution (in-house)
		faced with credit, liquidity and/or operational risk. Can be mitigated by using more than one provider but then the Agency model would probably be more effective. As the hedge's portfolio grows, GCF may hit the credit limit granted by the counterparty	counterparty(ies) of its choice ✓ GCF sets limits against each counterparty and the Agent monitors the exposure	✓ GCF monitors its exposure
Operational risk	✓ "Derisk" part of the hedging process including hedge execution, positions valuation, reporting, netting, settlement, reconciliation Pre-trade preparation, Exposure management, Deal determination, Accounting, Limits' monitoring remain under the Secretariat's responsibility			All tasks and inherent operational risk fall to the Secretariat
Market risk	Whatever the execution model, the price or value of OTC derivatives contracts held by GCF will rise or fall in response to changes in market factors such as foreign exchange and interest rates.			
Pricing	Not available	Reliance with one bank on a bilateral (and fundamentally uncompetitive) basis	✓ Can offer the best price among a "panel" of banks	✓ Access to a selection of eligible banks
Implementation	Not available yet Low visibility on the potential date/level of services/requirements	✓ Simpler set-up and relationships management as only one counterparty is involved in the trade	✓ The currency managed solution from the Agent is governed by a single document – e. g. the Currency Management Agreement. This is a bilateral agreement between the GCF and the Agent. ✓ The F/X trading relationship is governed by either:	✓ Allows for more flexibility and autonomy ✓ Transaction cost transparency ✓ Develop & strengthen in-house Treasury capabilities and operations The whole set-up could be a lengthy process Additional management oversight needed

	Outsourcing to the Trustee	Outsourcing to an external partner		Direct execution (in-house)
			1. Agency ISDA[3] –bilateral ISDA agreement signed between the Agent as currency manager and each of the FX counterparties, for which GCF is added to the schedule of eligible funds. 2.Bilateral ISDA[4] –ISDA agreement negotiated between GCF and the FX counterpartie(s) of choice. GCF will have the ability to directly negotiate specific terms.	
		✓ Streamlines the credit and documentation process ✓ Enables a small GCF operations staff and still executes complex and high-volume trading Additional contracts necessary e.g., overlay agreement		
Cost	Not available	Estimated supplementary costs of 7 to 10 basis points to be applied to nominal hedges portfolio		Required investment in system infrastructure, front/back-office, transactional, execution venue (estimated cost USD 50,000–70,000) ✓ Economy of scale achieved as the hedges portfolio grows

Note: Some FX providers may propose a hybrid model, i.e. principal model with access to pricing from a small panel of market participants.

[3] The Currency Manager/Agent has negotiated ISDAs with a panel of banks, where the Currency Manager acts as agent on behalf of a list of underlying clients (i.e. the "eligible funds"). The Currency Manager is not a party to the ISDA. Rather, the Currency Manager is entering into the ISDA as agent on behalf of the client. The client (GCF) and the FX counterparty are themselves parties to the ISDA. The FX counterparty will have full recourse to GCF, but the Currency Manager does not have recourse to GCF via the ISDA.

[4] GCF contracts directly with the hedge counterparty. If GCF chooses this option, the Currency Manager would need to be informed who GCF is considering ISDA negotiations to ensure the Currency Manager is able to trade with them (in other words on the approved counterparty list of the Currency Manager). If GCF chooses a counterparty not currently in the Currency Manager line-up, then GCF will have certain compliance and monitoring responsibilities. The Currency Manager will not perform those responsibilities.

Should the Trustee be able to provide FX hedging services for GCF in the near future and if such servives provided by the Trustee are considered to be a preferrable option, the Secretariat would implement the policy set out in Annex II (the "Policy") with third party commercial counter-parties on an interim basis. Specifically, the Secretariat would decide on the most optimal duration of the hedging arrangement(s) to be entered into with the relevant third-party hedge provider under the Policy so as to enable the GCF to transition its hedging arrangements to the Trustee in an orderly manner. If the Trustee is able to provide hedging services for GCF, the Secretariat will first assess, in partnership with the Trustee, the scope of services that can be provided, as well as the associated terms & conditions, legal documentation required and the costs of such hedging services, and consider if the proposed Policy can be applied to such arrangement. If not, the Secretariat will make necessary recommendations to the Board accordingly.

Appendix 3: Comparative analysis of estimated all-in cost of foreign exchange hedging with one counterparty

The table below is based on data collected with potential suppliers and counterparties, current financial market conditions and primary assessment of GCF as a counterparty. It is assumed that the above hedges do not require any collateral posting. It is an estimate for information only.

1. Hedgeable exposure is determined by the total encashment of promissory notes denominated in non-United States dollar currencies (euro, yen, Swedish krona) for each year. It does not include any netting from natural hedges but includes adjustments from donors' track-record and expectations in the realization of contribution agreements (except for the encashment of promissory notes denominated in pounds sterling which have been removed). The Secretariat does not expect to be able to hedge any of the 2022 exposure.
2. The hedges amount is determined by the proportion of hedgeable exposure (in our example 66 per cent) that is hedged back to the USD.
3. Legal costs are associated with reviewing and negotiating appropriate agreements with one counterparty. There is no cost in 2024 and onwards as the agreements will have already been established since 2023. If these agreements are finalized by the end of 2022 (as per the budget request), then there should be no legal cost in 2023. However, should GCF deal with more than one counterparty over time, it may bear recurring legal costs (see paragraph V.49 above)
4. Transaction cost, i.e. market price determined by the size (notional), tenor, payment frequency, currency, etc.
5. Outsourcing service fees associated with operational functions (confirmations, settlement and payments, reporting requirements, etc.)
6. As a comparison, the "in-house fixed" cost is provided should the Secretariat directly perform the execution and other operational functions.

Year	Hedgeable Exposure *(USD eq. ref rate)*	Hedges amount (hedging ratio = 66%)	Legal cost		Transaction cost		Outsourcing services fees		Total cost		In-house fixed cost		Total cost	
			Estimated range		Estimated range		Estimated range		Estimated range		Estimated range		Estimated range	
2023	829,582,567	553,055,044	40,000	60,000	110,000	550,000	390,000	550,000	540,000	1,160,000	50,000	70,000	200,000	680,000
2024	504,171,850	336,114,567			70,000	340,000	240,000	340,000	310,000	680,000	50,000	70,000	120,000	410,000
2025	454,171,850	302,781,233			60,000	300,000	210,000	300,000	270,000	600,000	50,000	70,000	110,000	370,000
2026	362,794,415	241,862,943			50,000	240,000	170,000	240,000	220,000	480,000	50,000	70,000	100,000	310,000
2027	332,597,189	221,731,459			40,000	220,000	160,000	220,000	200,000	440,000	50,000	70,000	90,000	290,000
2028	240,551,917	160,367,945			30,000	160,000	110,000	160,000	140,000	320,000	50,000	70,000	80,000	230,000
Total	**2,723,869,788**	**1,815,913,192**	**40,000**	**60,000**	**360,000**	**1,810,000**	**1,280,000**	**1,810,000**	**1,680,000**	**3,680,000**	**300,000**	**420,000**	**700,000**	**2,290,000**
Average/year	**453,978,298**	**302,652,199**	**6,667**	**10,000**	**60,000**	**301,667**	**213,333**	**301,667**	**280,000**	**613,333**	**50,000**	**70,000**	**116,667**	**381,667**

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