THE BUSINESS CASE FOR DEBT-FOR-DEVELOPMENT SWAPS FOR CHINESE INSTITUTIONS

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EXECUTIVE SUMMARY

This note supports financial stakeholders in assessing the business case for "debt-for-development swaps." These comprise agreements where sovereign debt is exchanged for liabilities tied to specific development commitments, typically aligned with the Sustainable Development Goals (SDGs) to end poverty and protect the planet. Consequently, such swaps may include conditions related to climate action, biodiversity, health, education, and other social or environmental objectives.

It analyses roles and opportunities for existing and new creditors, financial service providers, and related institutions (e.g. credit insurers), with a focus on Chinese financial institutions, unlike most studies that center on debtor country needs and creditor-debtor dynamics in structuring and implementing swaps. Chinese interest in debt swaps is growing, while globally, their use has accelerated. This follows rising sovereign debt distress in developing countries post COVID-19, with total external debt servicing at an unprecedented $ 1.4 trillion in 2023 - one quarter of the finance missing for the SDGs. This note argues that not sufficient attention has been given to the role of creditors in resolving this, as well as the unique characteristics of Chinese creditors, and their commercial motivation to engage in a swap.

Specifically, the note presents a feasibility framework for undertaking transactions of interest-bearing debt via buybacks and refinancing in the Chinese context – for example, to reduce risk, or gain a higher return. This note recognizes the inherent complexity of debt swaps and builds on prior analyses, including the World Bank/IMF's focus on debt sustainability. It proposes four key criteria for Chinese financial institutions to consider in deciding whether to participate in debt swaps. These include:

- **The debt share** of a country's total debt as a factor determining whether Chinese institutions are likely or not to engage;
- **The debt type**, to shape transaction modes and participation incentives, along with;
- **Commercial viability**, as successful swaps of interest-bearing debt must deliver net financial and developmental gains, both for debtor countries and creditor institutions; and
- **The debtor's ability to implement** swaps is also proposed as a core determinant of feasibility.

While noting political considerations and challenges in debt swaps, as well as the need for debtor countries to generate debt sustainability gains via swaps, the report highlightes benefits and opportunities for Chinese government-linked financial institutions seeking to enter a commercial debt swap. It looks at transactions involving the buyback and refinancing of sovereign debt, typically backed by credit enhancement.

This concludes with a stylised step-by-step process for swapping interest-bearing debt, noting that debtor country willingness is critical, and that all steps must be agreed by various stakeholders before the transaction. In doing so, it is hoped that such tools may help to close the SDG financing gap, through long-term, affordable development finance, delivering returns where they will count most.

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01 **INTRODUCTION**

The sharp rise in debt distress across developing countries, combined with the urgent need to scale financing for the Sustainable Development Goals (SDGs) to end poverty and protect our planet, **has renewed global focus on debt-for-development swaps ("debt swaps")**. Debt swaps are agreements between debtor governments and creditors to exchange sovereign debt for liabilities tied to specific development commitments[1], typically aligned with the Sustainable Development Goals (SDGs)—such as climate mitigation, biodiversity, health, education, and other social or environmental outcomes.

Originating in the 1980s, **debt swaps have gained renewed traction amid post-COVID-19** sovereign debt challenges[2]. Recent high-profile transactions include debt-for-nature swaps in Barbados, Belize, Ecuador, Côte d'Ivoire, El Salvador, and Gabon. Together with the 2016 Seychelles swap, these deals have refinanced over US$3 billion in sovereign debt and allocated more than US$1 billion to conservation funding.[3]

The growing number of successful transactions has made debt swaps "a tried and tested tool in the development finance toolkit"[4]. As more stakeholders recognize the benefits, initiators and champions expanded beyond nature conservation NGOs to include debtor governments, commercial, bilateral, and multilateral creditors, as well as financial service providers.

International efforts to promote debt swap applications have also accelerated. A task force of the world's top development banks launched at COP28 in 2023[5]; a coalition of six leading global environmental organizations was announced at the biodiversity COP in 2024; and the World Bank and IMF released a debt swap guidance document[6]. The promotion of "greater use of debt swaps for the Sustainable Development Goals" was also included in the recently adopted Pact for the Future.[7]

Interest in debt for development swaps has also been increasing in China. The China International Development Cooperation Agency (CIDCA) signed a memorandum of understanding with Egypt[8]. Studies supported by Chinese organizations, including government-linked organizations, have shown the opportunities for countries to engage with China piloting such debt swaps to achieve higher debt sustainability for creditors and debtors alike[9].

1— (World Bank, 2024)

2— The wave of the debt swap discussion was aligned with global sovereign debt initiatives including the G20 Debt Service Suspension Initiative (DSSI), the Common Framework, alongside various bilateral and multilateral debt restructurings and debt holidays (e.g., Sri Lanka). China, as one of the largest bilateral creditors to emerging economies, and the largest lender in multiple countries, has joined the G20 DSSI and Common Framework, contributing to multilateral initiatives on the matter.

3— (Winters and Clark 2024)

4— (Chen and Liu, 2023)

5— The banks include: Agence Française de Development (AFD), Asian Development Bank, African Development Bank, European Investment Bank, Green Climate Fund, Global Environment Facility, Inter-American Development Bank, and United States International Development Finance Corporation.

6— (World Bank, 2024)

7— (Art 50 (f) United Nations General Assembly 2024)

8— (Reuters 2023; United Nations Climate Change (UNFCCC) 2024)

9— (Swanson et al. 2022; Nedopil et al. 2023; Sun 2022)

02 DETERMINING THE FEASIBILITY OF DEBT SWAPS

2.1 Standard framework to determine debt swap feasibility

In the standard framework, a debt swap is classified by the type of creditor involved.

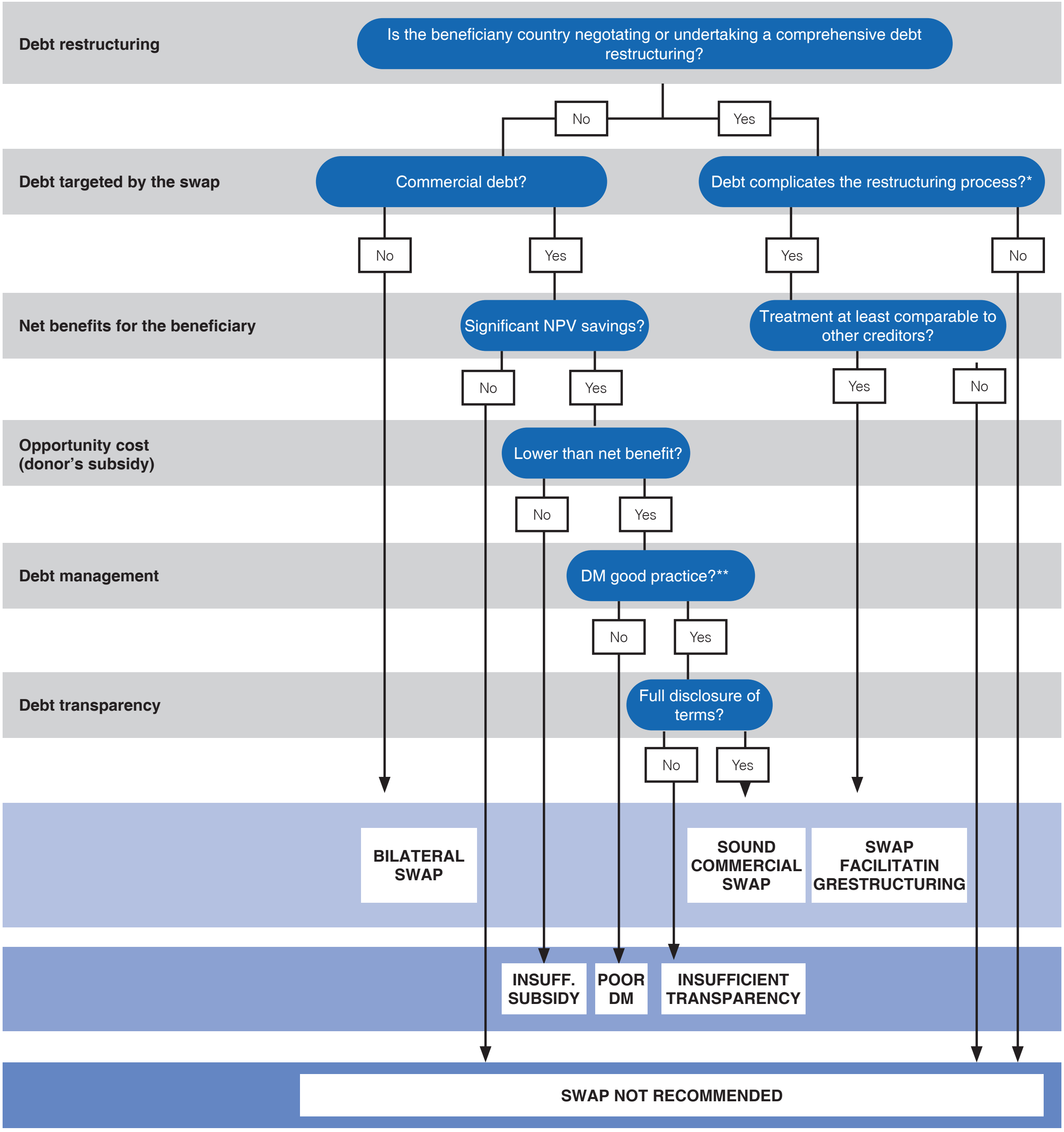
- **Bilateral swap:** A swap affecting sovereign debt held by a (conglomerate of) sovereign nation(s) as creditor(s). Bilateral swaps can be implemented directly between countries and – theoretically – **their feasibility depends on the creditor country's generosity**[10]. Financial considerations of the specific institutions involved are less relevant.
- **Trilateral/commercial swap**: A swap affecting sovereign debt held by commercial investors (e.g. by sovereign bondholders). These involve the **buyback and refinancing of the debt**, often with the support of international non-governmental organizations (e.g. to provide credit enhancement). In these circumstances, financial considerations of different stakeholders, including financial creditor institutions, are among the key factors driving the feasibility and success of the transaction.

Despite being relatively more complex, trilateral swaps have become more common since COVID-19 compared to bilateral swaps. Accordingly, the World Bank, together with the IMF, has provided a more comprehensive framework. This evaluates the feasibility of commercial swaps depending on (see Figure 1)[11]:

- The initial debt situation and the swaps' impact on the debt sustainability outlook;
- The net financial benefits related to the debt swap transaction for the beneficiary ("significant NPV savings");
- Opportunity costs for the borrower and donor vis-à-vis the complexity and transaction cost of a swap, whereby the opportunity cost should be lower than the net benefits for the debtor country.
- The debtor's country's debt management capacity, which should be high.

10—Bilateral swaps can be counted as official development aid (ODA), as they represent a transfer of resources from the donor country (creditor) to the recipient country (debtor).
11— (World Bank, 2024)

Figure 1: Debt swap feasibility framework (Source: World Bank) [12]



Notes:
**For example: collateralized debt, long-standing arrears, bonds without CACs.*
*** For example: swap aligned with the debt strategy objectives; debt management ofice with the capacity and systems to assess thelegal/financial implications, record, and report on the swap.*
Source:World Bank/IMF Staff.

12—In this framework it is important to note that the authors focused predominantly on debtor countries with diverse creditors and debt instruments requiring the debt swap to be integrated into comprehensive debt restructuring, noting that a swap would "likely not be sufficient to make a meaningful contribution to restoring the debt sustainability of a country with a solvency problem". Past examples, however, point to opportunities where debt swaps restructured a countries full overseas debt (e.g., Belize). This also points to specific opportunities for China, which in some cases holds the majority or almost complete debt in countries (e.g., various small island states, Pakistan). In such cases, China might be able to integrate a debt swap as an elementary condition in comprehensive debt restructuring that restores debt sustainability.

Additionally, according to Gates Foundation Senior Programme Officer, Adil Ababou, the feasibility of commercial swaps can be improved based on "three guiding principals"[13]:

- The definition of a long-term vision of what can be achieved through swap resources;
- Targeting expenditures and projects that benefit from long-term financing; and
- The existence of a mechanism to ensure additionality with government spending that would not have been incurred otherwise in support of sustainable development priorities in the partner countries.

2.2 Debt swap feasibility in the Chinese context

In the Chinese context, the standard distinction of debt swaps depending on the type of creditor is insufficient. Chinese loans exhibit a fluid nature, with most loans needing to be considered "commercial" irrespective of the creditor, or the high degree of government involvement in all financial institutions.[14]

We suggest a classification of Chinese loans is based on the origin of the funding source of the loan: As shown in Figure 2, Chinese policy banks, such as China Exim Bank, lend on concessionary (low-interest concessionary loans), as well as commercial terms (through preferential export buyer's credit (PBEC)). The distinction of their funding terms correlates with the source of their funding from either the Ministry of Finance or capital markets. Other Chinese state-owned financial institutions (SOFIs), such as China Development Bank (CDB), ICBC, Bank of China as well as state-owned enterprises also provide commercial loans by raising money on capital markets. Importantly, for most Chinese commercial loans and preferential export buyer's credits in higher risk countries (e.g. loans for infrastructure projects), Sinosure, the Chinese state-owned credit insurance agency, provides risk insurance.[15]

Following this categorisation criteria, we can distinguish:

- **Chinese debt fully funded by official sources** (e.g., zero-interest loans, low-interest concessional loans) can be swapped or forgiven purely via a bilateral agreement based on the generosity and considerations of the Chinese Government. The framework used would follow that of a standard bilateral swap.[16]
- **Transactions that would swap market-funded debt would instead necessitate commercial value** for the creditor institution(s) and other stakeholders, if they are to be successfully implemented, not least to satisfy fiduciary duties of the financial institution, vis-à-vis its investors and creditors.

The next part of this note focuses on the business case for swaps of market-funded debt swaps – which we refer to for consistency as commercial swaps. We explore benefits and mechanisms for the involvement in a debt swap from a commercial and financial perspective, rather than a political one. Thus, while we recognize political considerations and challenges in debt swaps, as well as the need for debtor countries to generate debt sustainability gains through the swap, this note focuses on the feasibility for Chinese government-linked financial institutions to enter in a commercial debt swap, looking at transactions involving the buyback and refinancing of sovereign debt, typically backed by credit enhancement.

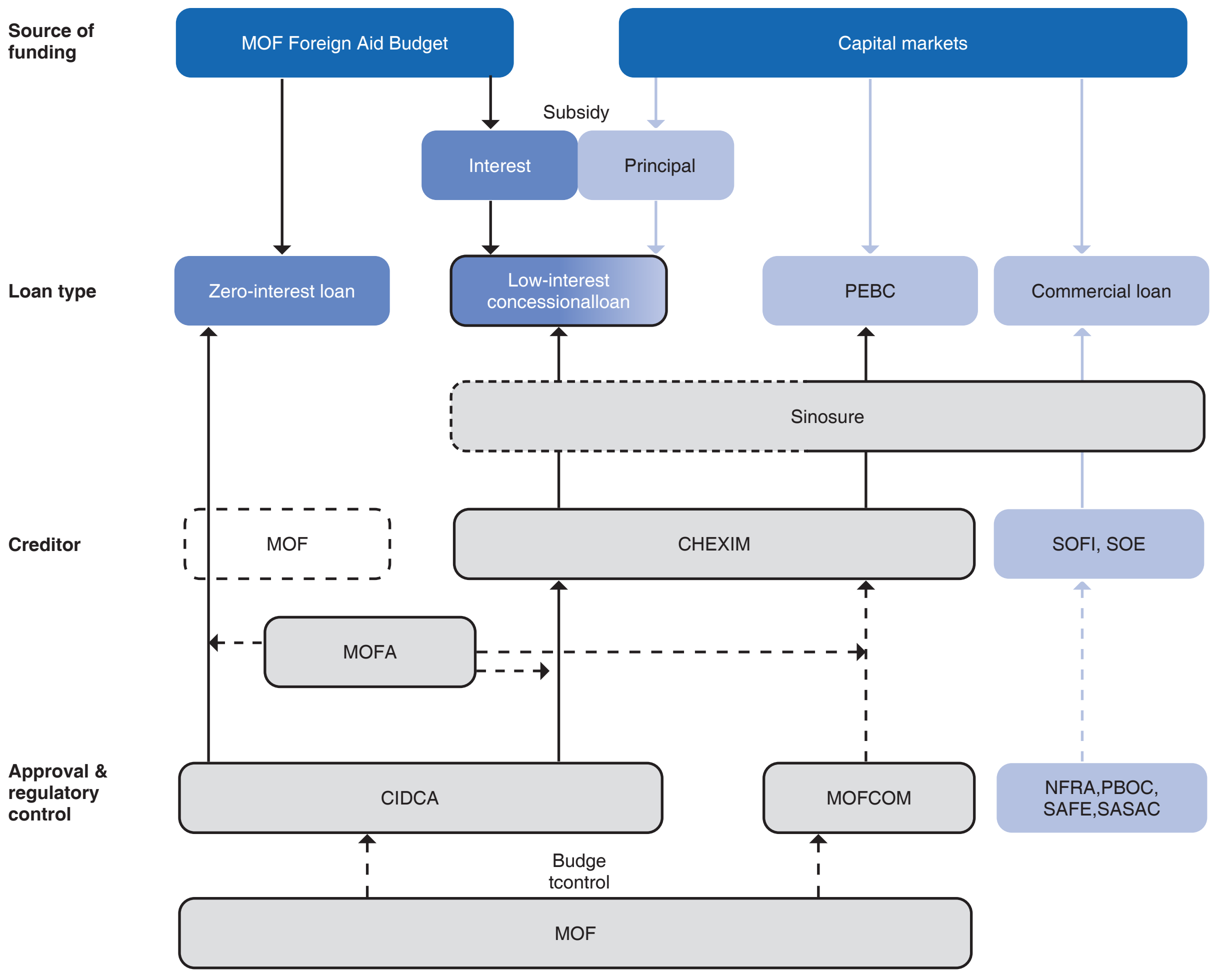
13— (Ababou 2025)

14—This includes not only the two major policy banks – China Development Bank and China Exim Bank – but also ICBC and Bank of China.

15—For low-interest commercial loans, Sinosure might provide insurance as well. Sinosure typically requires sovereign guarantees from the debtor country to provide insurance to a project based loan. (Chen and Liu 2023)

16— See (Nedopil et al., 2023) for an analysis of China's potential for debt reorientation towards the SDGs.

Figure 2: Nature of Chinese sovereign lending
(Source: Author, based on Nedopil et al., 2023[17])



MOF:	Ministry of Foreign Affairs	SAFE:	State Administration of Foreign Exchange
PEBC:	Preferential Export Buyer'sCredit	SASAC:	State-owned Assets Supervision and Administration Commission
MOFA:	Ministry of Foreign Affairs	MOFCOM:	Ministry of Commerce
SOFI:	State-owned financial institution (e.g., China Development Bank(CDB), ICBC, Bank of China)	CHEXIM:	China Exim Bank
SOE:	State-owned enterprise	CIDCA:	China International Development Cooperation Agency
NFRA:	National Financial Regulatory Administration	PBOC:	People's Bank of China

17— *(Nedopil et al., 2023)*

03 THE BUSINESS CASE FOR DEBT SWAPS FOR FINANCIAL INSTITUTIONS

A debt swap can become a commercial opportunity for creditor institutions holding sovereign debt when the value of the sale of the debt position through buy-back or assumption by a third party is higher than the value of the debt recorded in the balance sheet.

Such a commercial opportunity arises when the full debt service based on timely interest and principal payments by the debtor country is unlikely. In this case, the expected value of the amortized debt is reduced and, in many jurisdictions, would require creditors to mark the value of the loan "to market" through "provisioning" that records the expected loss in the loan's value.[18] Such mark-to-market accounting is anchored in regulatory and accounting standards, such as the International Financial Reporting Standard 9 (IFRS9) that introduces Expected Credit Loss (ECL), and requires financial institutions to recognize such provisions based on expected losses (rather than incurred losses).[19] IFRS 13[20] and Accounting Standards Codification (ASC) 820[21] define how to measure fair value, including inputs such as market prices, observable data, and valuation techniques when market prices are not readily available.

For example, before the debt swap in Belize in November 2021, the Belize government bond was traded at about 40 cent to the dollar[22]. This valuation requires bondholders to re-value their exposure of the debt accordingly (i.e., at about 40 percent of the amortized value based on agreed debt service), with ensuing financial losses, as well as potential reporting requirements to the markets and regulators on non-performing loans (NPLs), triggering further commercial losses. By issuing a new blue bond supported by Credit Suisse as the financial service provider and with credit enhancement by the U.S. Governments' International Development Finance Corporation, creditors were offered a buyback of the debt at above 40 cents on the dollar, generating a commercial opportunity for them.

In general, **benefits from the swap transaction would be accrued by the creditor, as well as various types of financial institutions involved.**

- Original creditors benefit by:
    - generating a direct financial benefit through selling debt positions above mark-to-market values;
    - rebalancing holdings in non-performing or at-risk assets;
    - reducing country risk exposures;
    - satisfying investors and regulators' needs for more sustainable and impact finance (e.g., sustainable wealth management products).

18—Provisioning is implemented by recording a liability on a provision account that essentially sets aside funds to cover potential losses of the loan compared to the amortized value of the fully serviced loan. Simultaneously, the loss is recorded in the profit and loss account. For example, if a loan originally valued at $100,000 is re-estimated to be worth $80,000, a $20,000 provision is created and simultaneously recorded on the profit and loss account as a loss of $20,000. In practice, the loan thus remains on the balance sheet at its original value of $100,000, while the loan's expected value is shown after deducting the $20,000 provision. If the value of the loan recovers, the provision can be reduced or reversed.

19—(International Financial Reporting Standards (IFRS), 2024a, 9)

20—(International Financial Reporting Standards (IFRS), 2024b, 13)

21—(Financial Accounting Standards Board (FASB), 2022)

22—(The Nature Conservancy (TNC), 2022)

- Financial service providers benefit by:
  - Generating service fees for restructuring services;
  - Building new financial products with the ability to be scaled in the market;
  - Satisfying investors' needs by offering more sustainable and impact finance (e.g., sustainable wealth management products).
- New investors benefit by:
  - Investing in a more secure asset, based on credit enhancement and credit guarantees;
  - Investing in a sustainable asset (e.g., blue bond), thus complying with ISSB or domestic sustainable disclosure regulations or regulatory stipulations for sustainable finance.

The following sections zoom in on possible benefits for different Chinese financial institutions involved in sovereign from a commercial debt-for-development swap. In addition to the creditors, investors and financial service providers involved in Chinese lending, we also analyse opportunities for Sinosure, the Chinese state-owned credit insurance company, as the provider of risk insurance for most of Chinese commercial loans and preferential export buyer's credits in higher risk countries (e.g. infrastructure project loans).[23]

3.1 The business case for the original creditor institution

The business case for creditor institutions holding the existing sovereign debt position is determined by the net benefits of the swap. This can be assessed in terms of direct financial returns, non-performing loan reduction, and other benefits.

Direct financial returns from debt swaps

A direct financial return from a swap can be generated if the offer price to purchase the debt is higher than the present value of the debt position.

A net financial benefit through a swap for creditor institutions needs to be accurately assessed based on risk-adjusted return expectations of the debt position. Net benefits should be calculated by comparing the present value of the total (realistically) expected debt service with the present value of an envisaged sale of the debt positions. The present value of the sale of the debt position should be higher than the present value of the debt position.

The present value of the debt position held by existing creditors decreases if debt service payments are significantly delayed, or realistically expected to be delayed, in either or both interest and principal payments. This can also include rescheduling payments to later dates, as this would reduce the present value of the position. The recording of the present value through mark-to-market valuation depends on the expected future cash flows from the loan. Various standards have been developed to support "fair" valuation of

23— *For low-interest commercial loans, Sinosure might provide insurance as well. Sinosure typically requires sovereign guarantees from the debtor country to provide insurance to a project-based loan.*

these flows, including IFRS13 and ASC820. For fair sovereign debt valuation, a relatively widely available indication can be the value of publicly traded sovereign bonds of that country - when available, with some adjustments for the differences in the bond and other commercial debt maturity and other conditions. Holders of sovereign debt can gauge higher sovereign debt risk if bond holders value and trade the sovereign bond below or significantly below 100% of the contractual value of the bond.

A further consideration is the value of the credit default insurance for creditors. To understand the impact of those payments on the present value of the total loan, a similar calculation of discounting future cash flows would be necessary. Considering that the insurance would pay only a part of the full loan amount (e.g., typical export credit agencies cover about 80% of the amount, while Sinosure might cover up to 95% of the expected payouts[24] and the pay-outs might later than the original contractual payments (i.e., similar to debt rescheduling), the present value of the position would be negatively affected. Thus, a swap becomes a business case for the creditor if the present value of the insurance payout is lower than the present value of the buyback.

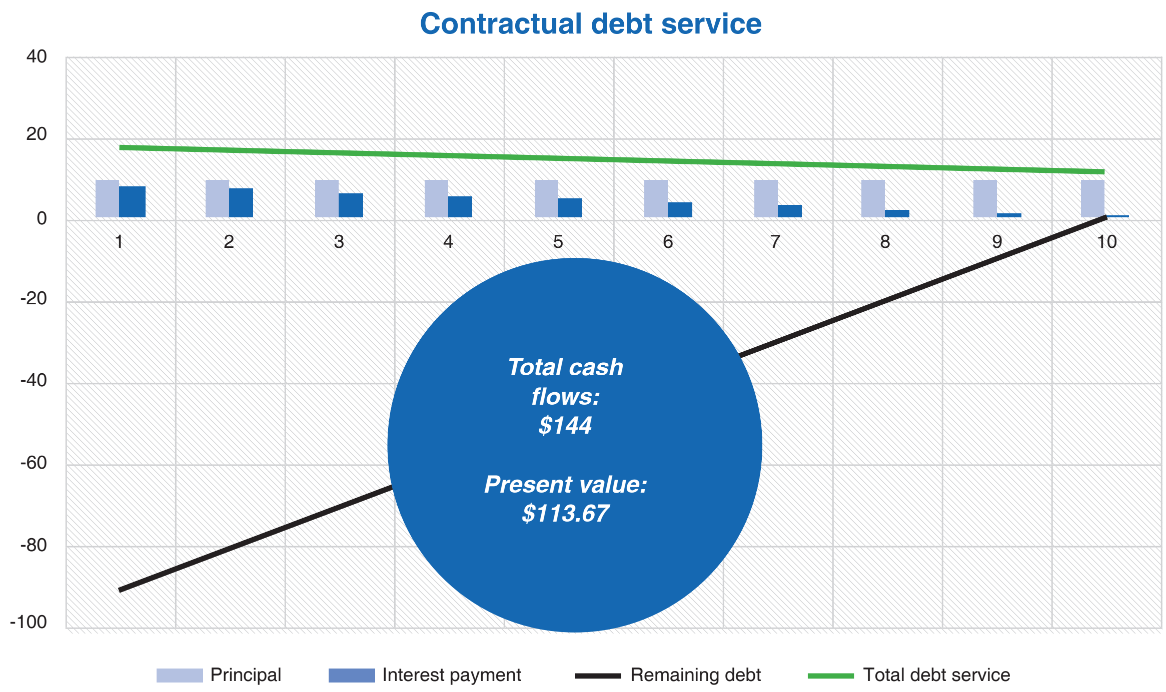
Starting from a business-as-usual scenario, the box below describes two financial return outcomes in case of a (risk of) debt default, versus a swap, including the possibility of payouts from the credit default insurance.

Box 1: Simplified example[25] of financial returns through a swap, based on the net present value of debt

Business as usual: The present value of a 10-year loan worth 100 at an interest rate of 8% and an internal discount rate of 5% is $113.67 (at equal interval principal payments of 10 per period). This would be recorded as the original (amortized) value in the balance sheet. The total cash flow to the creditor financial institution over the 10-year period would be $144 (see Figure 3).

If the debtor faces payment issues, or the loan payments are rescheduled, both present value and cash flows will change.

Figure 3: Financial returns profile based on contractual debt service (Source: Author)



24—(Chen and Liu 2023; Gelpern et al. 2021)

25—This is a simplified example with equally distributed repayments, no tax implications etc. Reality is more complex.

Opportunity 1: Restructuring with no insurance: Assume the original loan is restructured and is to be paid back over 20 years (instead of 10 years) with the first three years at 0% interest and no principal until year 10. The total cash flows over the 20-year period would increase to $200. However, the net present value of the loan would decrease to $79.38.

The creditor would be required to create a provision of about $34, as this is the difference between present value and recorded amortized value from the contract. The profit and loss account would similarly record a loss of $34 (see Figure 4). Conversely, if the creditor can sell the debt position of the restructured debt at over $79.38, they create a commercial value (see Figure 4).

Opportunity 2: Credit default insurance: Should the loan be insured, e.g., to 90% of its value, the present value of the debt depends on the specific payout terms (e.g., timing of payouts, covered losses of interest and principal payments). For example, if the payout of 90% of the total value of the loan is paid out with 12 months' delay, total cash flows would be $129.6, while the present value would decrease to $97.43.[26] This would require provisioning of about $26. A sale of the asset at higher values than the present value would generate financial benefits for the creditor (see Figure 5).

In summary, the creditor financial institution should ideally engage in a debt swap **if the present value of the sale of the loan to outside investors ("buyback") is higher than the present (expected and fair) value of the debt.**

Reducing non-performing loans

Marking the value of the loans to market is a requirement in many jurisdictions and financial institutions need to declare non-performing loans to their regulators and the market (for publicly traded institutions). High NPL ratios reduce the quality of risk-weighted assets, e.g., under Basel III framework, and potentially affect a banks' capital adequacy ratio (CAR). This requires banks to increase provisions and reserves to cover potential losses, undermining the financial institutions' ability to raise new capital, or access central bank lending facilities, reducing profitability. In the worst-case, this could lead to credit rating downgrades, or higher requirements by regulatory and supervisory bodies (e.g., additional capital buffers, as well as restricted dividend payouts or bonuses).

By engaging in a swap, creditor financial institutions lower their NPL ratios and can thus free up resources for investing in higher performing loans.

Other benefits

Chinese creditor financial institutions can reduce their country risks based on excessive exposure by engaging in a swap. China's Debt Sustainability Framework for Participating Countries of the Belt and Road Initiative requires financial institutions to improve country risk management and ensure that specific quotas for debt exposure in a specific country are met[27]. Rebalancing the balance sheet for creditor financial institutions might free up resources to engage in other – potentially more beneficial – lending activities, even in the same country.

Finally, other regulatory and standards benefits can be generated for creditor financial institutions that require higher shares of sustainable finance products. This also provides an opportunity to sell sustainable financial products to domestic and international clients.

26—Insurance would pay the insured value of the difference between contractual and de-facto payments by the creditor. E.g., the creditor might pay 80% of the loan, and the insurance would cover the remainder of the insured amount.

27—Ministry of Finance of People's Republic of China 2019)

Figure 4: Financial returns profile based on adjusted debt service (Source: Author)

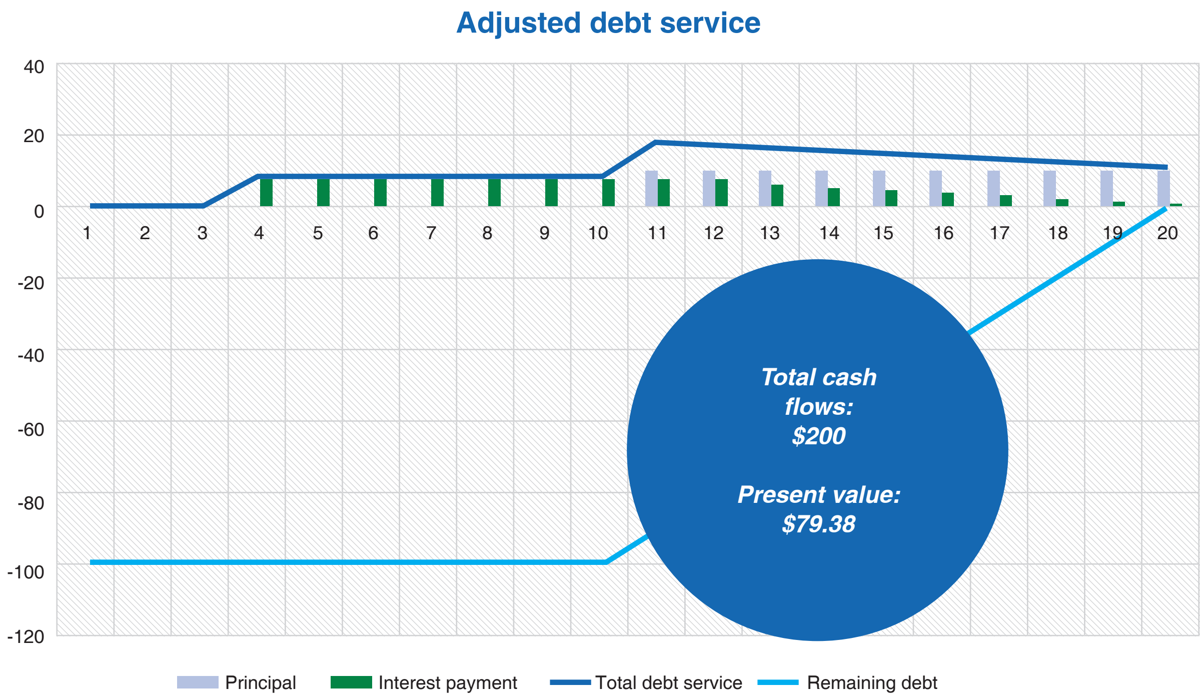
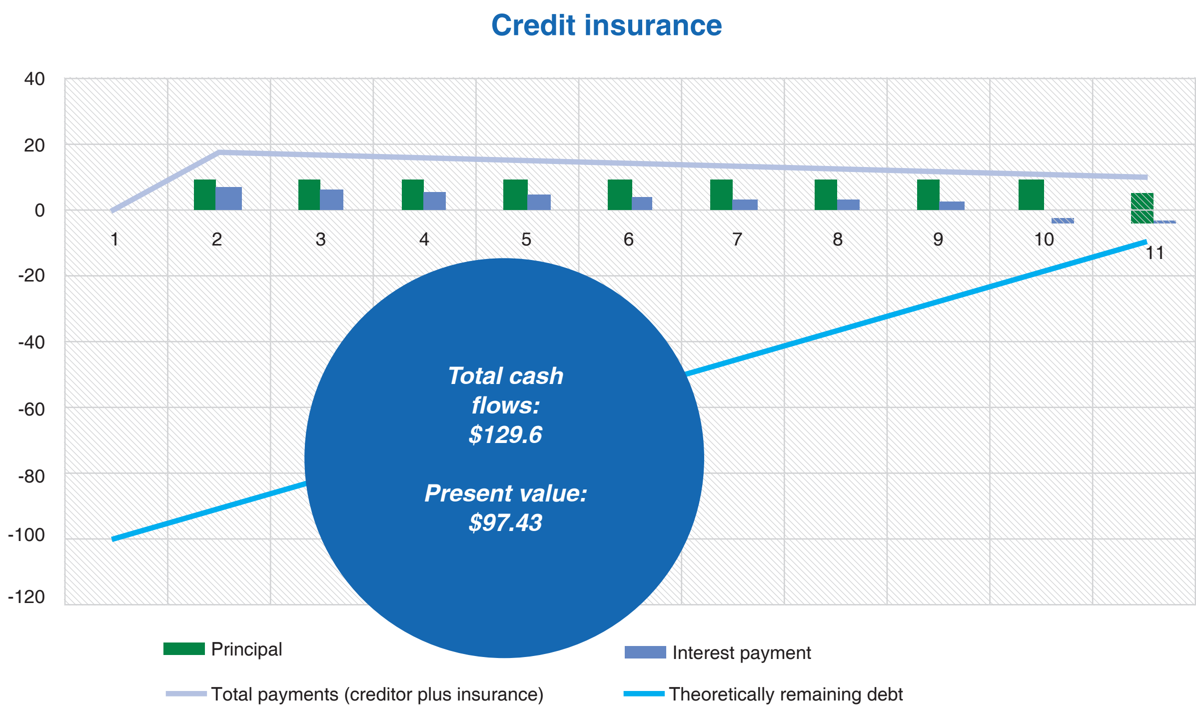


Figure 5: Financial returns profile with credit default insurance (Source: Author)



3.2 The business case for financial service providers

Chinese financial service providers engaged in a swap advising on and / or offering debt (re-)structuring services can directly benefit from supporting a debt swap via associated **service fees and by expanding business opportunities** (e.g., offering impact or sustainable finance products to clients).

The exact service fees will be determined contractually for each specific deal and information on previous deals are mostly confidential. From anecdotal evidence, previous debt swaps have had services fees similar to regular debt restructuring at around 0.5% to 1.5% of the restructured debt amount, typically born by the debtor. Below are two examples of known transaction cost (including legal fees) of previous swaps.

- Barbados US$2.0 million transaction cost as part of US$146.5 million total blue bond proceeds (1.3%).[28]
- Belize US$4.3 million transaction cost as part of US$364 million blue bond proceeds (3.3%).[29]

An important consideration for the business case for financial service providers is the scalability of a swap, i.e., the opportunity to provide similar solutions, or access to relevant partners of interested clients. A key ingredient to develop this scalable solution is the network of trusted partners involved in a swap, particularly the implementing partner of the its sustainability component (e.g., nature NGO, a renewable energy provider ensuring that a swap's sustainability component of the swap is credibly and transparently delivered). Expertise in swaps could be also provided to other Chinese creditors (e.g., with various potential debtor countries exposed to Chinese loans interested in debt swaps), as well as to creditors outside China interested in a swap, especially in countries where Chinese financial service providers have strong networks.

A further consideration for financial service providers is the ability to act as a broker or underwriter in issuing new sustainable debt instruments to the market, or to bespoke clients interested in creating sustainable impact. The capacity to offer such high impact financial products can strengthen the business case for financial service providers, by attracting new clients, or more assets under management.

3.3 The business case for credit risk insurers

For a credit insurer, such as Sinosure, exposure to non-performing loans or at-risk loans poses a direct financial risk expenditure, possibly requiring paying out significant parts of the loan value on behalf of the insured debtor.

Accordingly, the business case for credit risk insurers requires identifying pathways to reduce the risk of an insured default event of the loan and to lower the required pay-outs to the client (in the case of default). The following two options could be considered:

1. Full sale of loan to new investors with 100% insurance: The credit risk insurance supports sale of the loan at a discount to new investors by providing a guarantee to the new investors at the discounted value, possibly even for 100% of the loan, to entice new investors.

28—(*"Barbados Blue Bonds for Ocean Conservation" 2023*)

29—(*Humes 2022*)

2. Partial payout of loan to old investors and new loan support with 100% insurance where the credit risk insurance supports raising new capital from new investors sufficient to pay only part of the discounted loan.

The box below provides a simplified example of the involvement of credit risk insurance in a debt swap.

Box 2: Simplified example of credit risk insurance's involvement in a debt swap

<u>Business as usual:</u> The credit risk insurance covers the insured amount, which is the difference between the payment by the debtor country and the insurance coverage. For example, if the insurance covers 90% of the original loan value and the debtor country can service 75% of the payments, the insurance company would need to cover the difference between the agreed and paid amount.

In our example of a loan worth 100 and a delay of 12 months for insurance payments, payouts by the insurance company would be $25.92 with an NPV of $20.46 (the NPV for the creditor would be, as discussed above, $97.43). The maximum amount the insurance company would have to pay is $129.6 in cash flows if the debtor country does not pay at all (see Figure 6).

<u>Opportunity 1: Full sale of loan to new investors with 100% insurance:</u> The insurance supports the issuance of a new loan with a net present value of $100 to fully pay back (and provide an incentivize to sell to) the old creditors, to whom the present value of the original insurance on the loan is $97.43 (see Box 1). The debtor country reduces its risk of default as the new loan has a lower face value and lower debt servicing cost (see Figure 7). Thus, while the insurance company has a risk of a maximum payout of $126 and a maximum net present loss of $100, the likelihood of an insurance event is significantly lower and the insurance would thus reduce its risk-weighted payout through this model (see Figure 7).

<u>Opportunity 2: Partial payout of loan to old investors and new loan support with 100% insurance:</u> The insurance company expects high likelihood of an insurance event requiring it to pay out to current creditors, as payments of the debtor country are significantly disrupted. For example, the debtor country pays only 35% of its debt service. This would require the insurance company to pay out a total of $77.76 at an NPV of $61.38 for the insurance company.

Rather than paying the full amount, the insurance company supports the raising of a new loan with a present value of $50, which it combines with its own money ($50) to pay out the creditor for $100 (above the $97.43 threshold). The new loan is serviced by the debtor country, which will have to manage about 45% of the original loan payments (yet at a significantly lower overall debt to GDP exposure and thus an ability to raise new funds). The new NPV for the insurance under this arrangement is $47.62 and thus significantly lower than without the swap arrangement (see Figure 8: Partial payout of insurance (50%) and support for refinancing (50%) with 100% insurance.

Figure 6: Business-as-usual scenario for credit risk insurance (Source: Author)

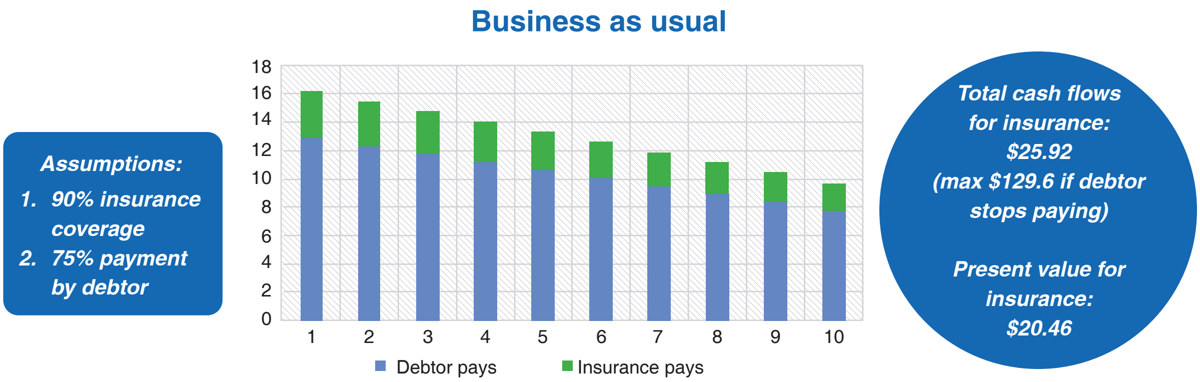


Figure 7: Payment scenarios for debtors after refinancing (Source: Author)

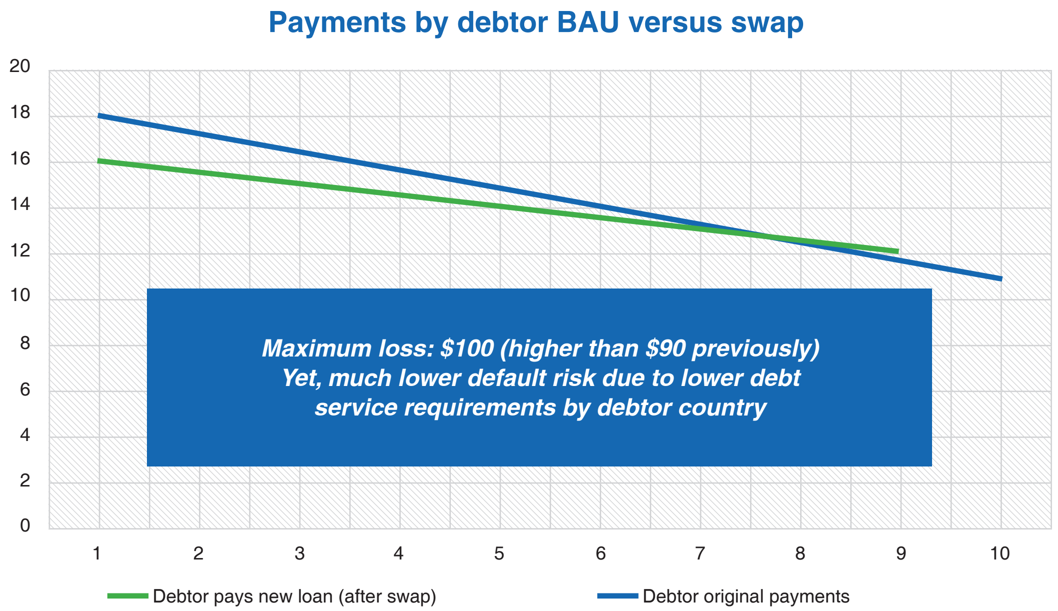
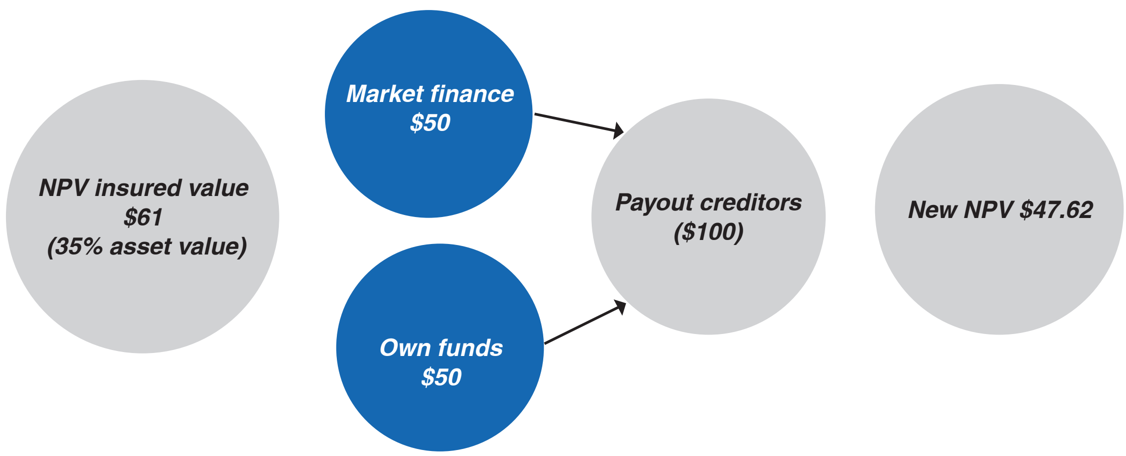


Figure 8: Partial payout of insurance (50%) and support for refinancing (50%) with 100% insurance (Source: Author)



3.4 The business case for the new investor

Based on the above analyses, investing in sustainable debt instruments has become standard practice for investors[30]. In short: investors buying the new debt instrument issued to buyout the original loan from the creditor (e.g., a blue bond) benefit from direct financial returns on that financial instrument (e.g., interest payment).

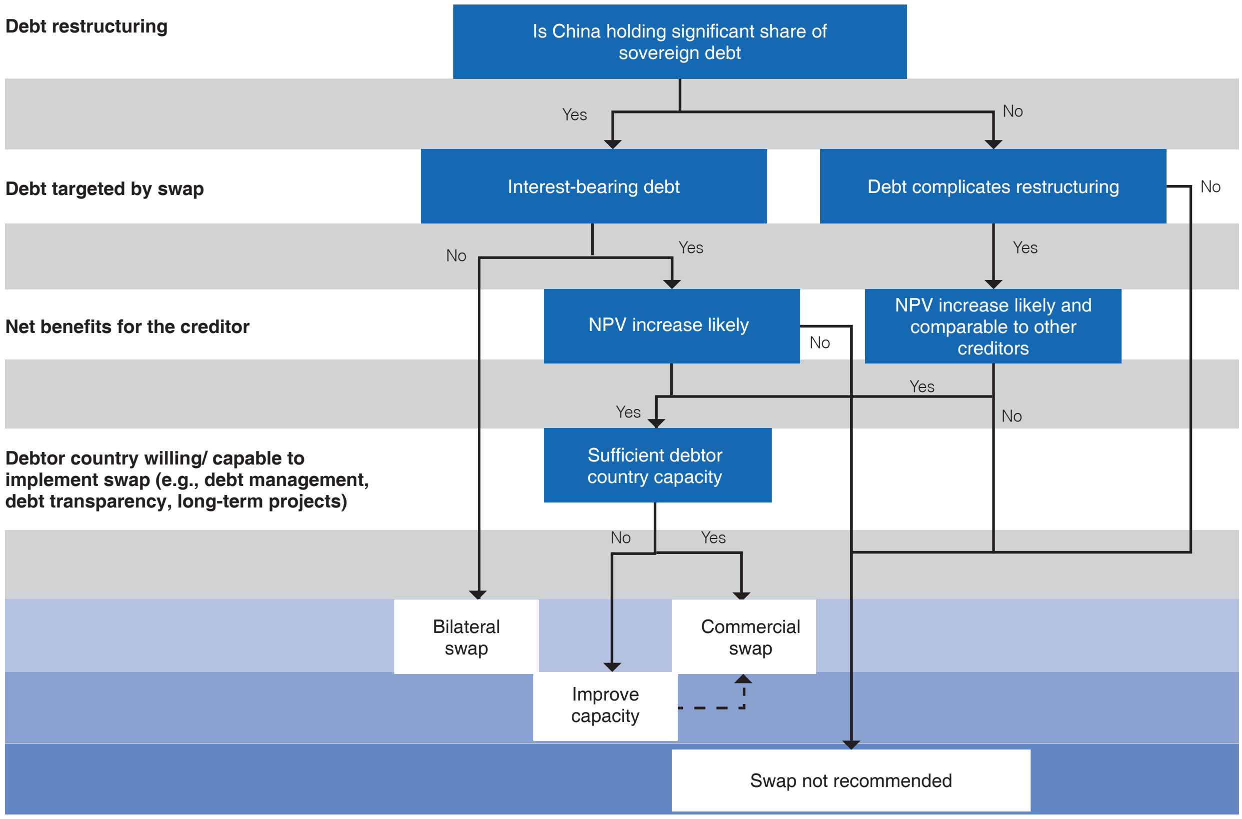
Due to a credit enhancement mechanism or credit risk insurance provided to that loan, risks are relatively low. At the same time, investors also benefit from holding a sustainable finance instrument, supporting the fulfillment of requirements by their investors or by regulators and standard setters (e.g., TNFD, ISSB).

04 FEASIBILITY FRAMEWORK OF DEBT SWAP WITH CHINESE CREDITORS

Based on the above analysis and the existing frameworks of debt swaps discussed in chapter 2, four criteria can be identified to determine the feasibility of a debt swap with Chinese participation (see Figure 9).

- **Chinese creditor exposure:** The share of Chinese debt held in a given country should be significant for Chinese creditors to take a proactive role and ensure that a swap does not undermine China's interests in comparison with other creditors. In debtor countries with dominant Chinese debt in specific sectors (e.g., energy), a thematic swap (e.g., debt for renewable energy swap) can also be possible without an overall Chinese dominant position focusing on this specific tranche of debt. In cases where Chinese creditors do not command a dominant position, a more comprehensive swap, including negotiation with other non-Chinese creditors, can also be undertaken (albeit likely entailing higher transaction costs).
- **Chinese debt classification:** To determine the typology of the swap transaction, it is important to note the different classification of Chinese debt positions compared to standard debt classification, which focuses on the creditor itself. As put forward in chapter 2, a more useful approach is to base Chinese debt classification on the original funding source of the debt (i.e., from the government or from the market), which stipulates different return requirements for Chinese investors. Chinese non-interest-bearing loans can be written off (possibly in exchange for sustainable development targets in the debtor country), while interest-bearing debt can be relevant for commercial swaps.
- **Generation of net benefits:** Creditor (and other) financial institutions should engage in debt swaps if they can generate a net benefit. The net benefit depends on the market value of the debt position, which should be mark-to-market on present value and depending on realistically expected future debt service payments, the reduction of non-performing loan assets, the improvement of country-level debt exposure and other factors.
- **Debtor country capacity:** Creditors and financial institutions should only engage in debt swaps if the debtor country's capacity to implement a swap is sufficient and a pipeline of long-term projects is available. The debtor country's capacity is particularly relevant in debt management and debt transparency, as well as in credibly implementing the sustainability component of the swap over the long-term.

Figure 9: Debt swap feasibility framework for Chinese financial institutions (Source: Author)

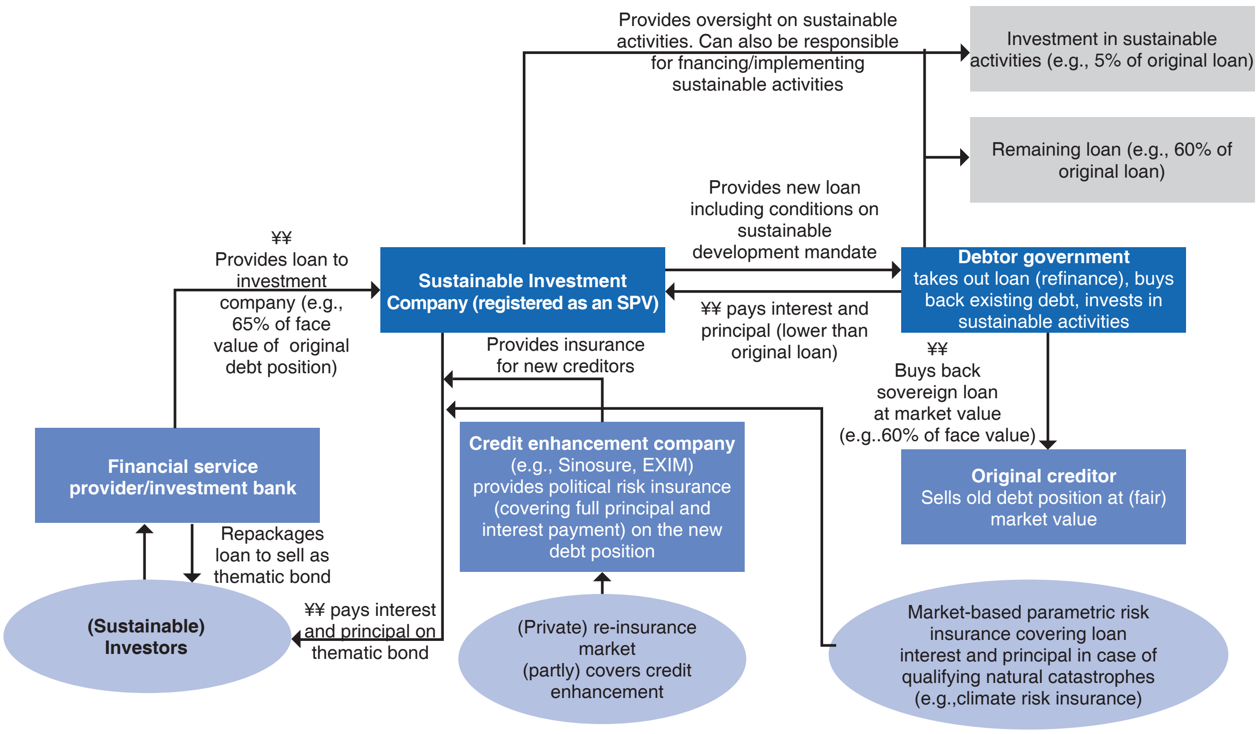


05 STEP-BY-STEP PROCESS OF A DEBT SWAP

Swapping interest-bearing debt can take various forms based on the experience accumulated from past commercial swaps. The following steps provide a guide (see Figure 10). However, it is important to note that this is neither the only nor necessarily the best way to engage in a debt swap. In general, debtor country willingness is critical and all steps need to be agreed by various stakeholders before the transaction can be implemented.

Important stakeholders include debtor country stakeholders (e.g., the ministry of finance and central bank), creditor institutions and potential regulators of such creditor institutions (in China this would include the People's Bank of China and the Ministry of Finance). They may also include new investors, potential international creditors and multilateral financial institutions (e.g., the IMF), financial service providers and implementing partners for initiatives aligned with the debtor's sustainability commitments (e.g., environmental NGOs, UN agencies). Below, we describe key steps and actors of a hypothetical debt-for-development swap transaction with Chinese participants.

Figure 10: Flow chart of a hypothetical debt for development swap transaction (source Author)



1. A champion for the swap **initiates negotiation** between the stakeholders of the transaction. Any of the parties involved can champion the swap: the debtor government, current creditors, new creditors, the credit insurance agency, the financial service provider, a non-government organization, or a UN organization interested and able to implement sustainability-related activities.

2. A sustainable investment company or special purpose vehicle (SPV) needs to be established, for example by a non-government organization (or possibly an agency responsible for overseas development assistance in the case of China).

   - The SPV is **responsible for paying future interest and principals of the new loan**, as well as to ensure the debtor government fulfills its new loan conditions, including regarding sustainability impact and activities.
   - The sustainable investment company can also be responsible for organizing **credit enhancement** (such as political risk insurance, climate risk insurance). For this, it agrees with a credit enhancement institution (e.g., Sinosure or Exim Bank in the Chinese ecosystem) to provide **political risk insurance** for the payments from the debtor government to the sustainable investment company. Typically, such credit enhancement is provided in exchange for sustainable development contributions of debtor government.[30] This effectively lowers the risk of the loan for the sustainable investment company (and indirectly lowers the risk for the thematic bond investors). Additional insurance, for example on climate risk defaults, can be bought on the market to protect both creditors and the debtor country.

3. A financial service provider, such as an investment bank, can be engaged to **support negotiations and in structuring** the transaction. Importantly,

   - The financial service provider **gives a loan** to the SPV of sufficient volume (a) to buy-out the loan by the original Chinese creditor to the debtor country at least at market value (e.g., 60% of face value); and (b) to provide additional funds as agreed with the debtor government and other stakeholders to fund sustainable activities in the debtor country.
   - The financial service provider converts the loan provided to the sustainable investment company into a **sustainable debt instrument** (e.g., thematic bond) that is sold to private investors and/or capital markets. In effect, it securitizes the loan provided to the sustainable investment company where the thematic bond becomes an asset-backed security (ABS).

4. The sustainable investment company **provides a loan to the debtor government to buy out the loan** from the Chinese creditor at market value (e.g., 60% of face value). The loan is at lower interest rates compared to the original loan due to the credit enhancement.

5. The debtor government uses the loan from the SPV to **buy back the debt position** from the original creditors.

   - The debtor government **invests** part of the saving from the swap into sustainable activities agreed with the sustainable investment company.
   - The debtor government **pays the interest and principal** on the loan to the SPV.

6. The sustainable investment company **pays the new investors** of the thematic bond (from payments received by the debtor government).

The result is:

- A buy-out of the creditor's loan position of at least market value; effectively a net positive financial result, if the original loan was marked-to-market.
- For the debtor government, the remaining loan is lower and thus debt service payments are lower, improving debt sustainability.
- For the sustainable investors, the new structure provides a guaranteed/insured financial return that includes a positive contribution to sustainable development.
- The financial service provider receives service fees.

30— *(Jensen 2024; Uzsoki 2020; Edmans, Gosling, and Jenter 2024)*

Box 3: A debt for climate/green energy swap for Pakistan

Background

Chinese state-owned enterprises (SOEs) have supported the development of the electricity market in Pakistan through financing, constructing, buying and operating coal-fired power plants. The financing was provided by both SOEs and Chinese policy banks with insurance by Sinosure. It also included sovereign guarantees from the government of Pakistan for payments under the power purchasing agreement (PPA).

Due to Pakistan's economic situation, part of the payments have not been made by the offtaker, and Pakistani government guarantees could not be upheld. Effectively, some of the loans have not been paid in time and significant arrears have emerged with the SOEs owning the company that still had to service loans to the Chinese policy banks, while Sinosure has not covered the losses due to a lack of an enforceable arbitration outcome. As a result, the value of the loans to the Chinese SOE is significantly below contractual value[31].

Thus, two elements make this situation viable for a debt swap based on buyback: first, due to the financing arrangements on the Chinese side with creditor institutions sourcing from the capital market and not government funds, this case presents itself as an opportunity for a potential commercial debt-for-development swap. Second, as the present value of the debt based on fair valuations is below contractual value, the debt buyback becomes feasible.

To include a sustainability element – allowing new funding for the buyback on sustainable debt markets, and increasing opportunities for credit enhancement, along with guarantee mechanisms in refinancing – it is proposed that the debt swap include coal retirement and renewable energy investment components.

Implementation (see Figure 11)

1. To implement the swap, a **sustainable investment company (or SPV) would be established.** The SPV negotiates with Chinese stakeholders to buy out the Chinese (state-owned) investors' holding in the coal-fired power plant at a fair price.

2. The **SPV would offer current investors a slightly higher price than the current fair value** to motivate investors to sell (e.g., at 65% of face value rather, than the 60% face value of a mark-to-market price).

3. The **SPV would forgive parts, or all, of the sovereign guarantees** provided by Pakistan based on the lower valuation of the coal-fired power plant. It would also agree to sell renewable electricity to the market in the future, instead of providing electricity through the coal-fired power plant. This allows for the early retirement of the coal plant, without losses in electricity supply.

4. The SPV and Pakistan can agree to utilize parts of the savings from the reduced debt service payments for the government of Pakistan to **be re-invested in improving the grid, to accommodate renewable power generation.**

5. To finance the buyout, **the SPV raises funds (e.g., 75% of the face value of the coal plant), either directly from international or Chinese capital markets, or through a loan plus loan-to-thematic bond conversion.** With a commitment to retire the coal-fired power plant early and invest in renewables, sustainable investors should be willing to provide lower financing costs.

6. To further lower financing costs, the **SPV would secure a credit enhancement,** at least through political risk insurance, but possibly also through grant financing or low-cost financing from development finance insti-

31— Contributions by the debtor government to sustainable development can be both a share of the new loan and of the "saved" debt service payments. The debtor government's contributions would be flowing through the sustainable investment company.

tutions. Such credit enhancement would also be possible due to the sustainability element of the transaction (e.g., coal retirement).

7.**The SPV might additionally be able to amortize emission reduction credits** (e.g., TRACTION, supported by the Monetary Authority of Singapore[32]) to raise additional funds or cash-flows.

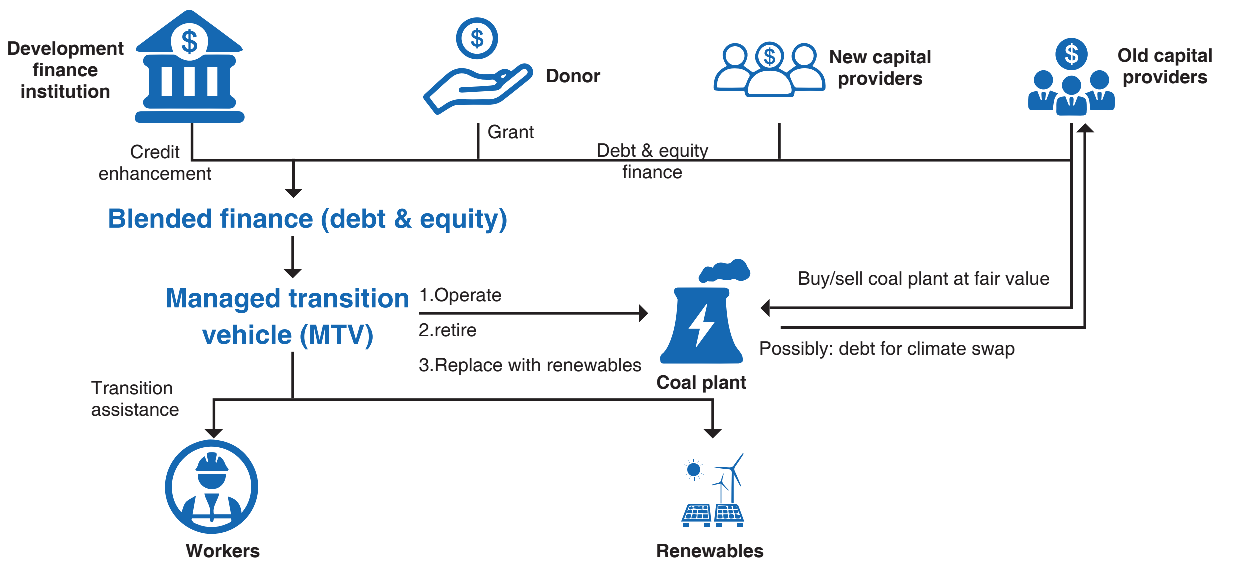
8.The SPV would pay back its sustainable investors through revenues from selling electricity to the offtaker in Pakistan.

Benefits from the debt swap would be as follows:

- The original investors (the SOE and policy bank) would secure a timely payback of their investment in the coal-fired power plant at fair value, above than the present value of the investment.
- The Government of Pakistan reduces its debt burden.
- The SPV has a long-term business model to generate and sell electricity at a lower cost (due to lower financing costs, as well as the transition to renewable energy likely lowering operational costs).
- The people of Pakistan have potentially lower energy costs and lower emissions.
- Sustainable investors get a guaranteed/insured return.

An additional benefit for Chinese companies may also include the opportunity to export renewable energy equipment.

Figure 11: Structure of a debt for renewable swap (Source: Nedopil, Ang and Hyder, 2024)[33]



32— (Monetary Authority of Singapore (MAS) 2023)

33— (Nedopil, Ang, and Hyder 2024a)

06 CONCLUSIONS

The study presents a novel framework for evaluating the business case for debt-for-development swaps (debt swaps) from the perspective of Chinese financial institutions and creditors. Unlike previous studies that primarily focused on the needs of debtor countries and the political aspects of debt swaps, this study emphasizes a commercial, pragmatic approach. It highlights the role of Chinese financial institutions as creditors, financial service providers, sustainable investors, and insurers, to optimize their engagement in debt swaps through appropriate design and mechanisms. The framework introduces four key criteria for feasibility: the share of Chinese debt in a project, the classification of Chinese debt, the need for commercial benefits for creditors, and the debtor country's capacity to implement swaps.

The study's key findings indicate that debt swaps can generate significant commercial opportunities for creditors, including direct financial returns, reduced non-performing loans, and improved risk management. Financial service providers can benefit from service fees and scalable financial products, while new investors gain access to relatively more secure and sustainable assets. The study also suggests that credit risk insurers like Sinosure could reduce payout risks through structured swap mechanisms. The next step would include exploring pilot projects to demonstrate the commercial viability of debt swaps for Chinese institutions, refining the framework through practical applications, and enhancing stakeholder engagement. This can facilitate broader adoption of debt-for-development swaps in future, by highlighting how sustainability swaps can also be financially sustainable – and even profitable – for those selling, buying, servicing, insuring or securitizing them. In doing so, commercial expectations of the financial system would better align with the needs of people and the planet in these critical transactions – enabling a world that can sustain, and include, everyone.

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