

出國報告（出國類別：參加國際會議）

出席亞洲開發銀行
「2022 年外匯投資管理論壇」
會議報告

服務機關：財政部國庫署

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派赴國家：新加坡

出國期間：111 年 10 月 25 日/111 年 10 月 28 日

報告日期：111 年 12 年 22 日

公務出國報告提要

報告名稱：出席亞洲開發銀行「2022 年外匯投資管理論壇」會議報告

頁數：23 頁

出國計畫主辦機關：財政部(國際財政司)

出國人員：財政部國庫署 簡任稽核陳怡臻

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出國地區：新加坡

報告日期：111 年 12 月 23 日

關鍵詞：亞洲開發銀行、經濟展望、永續發展、債券發行

內容摘要：

亞洲開發銀行(下稱亞銀)每年定期舉辦外匯投資管理論壇 (2022 Asian Regional Forum on Investment Management of Foreign Exchange Reserves) 為該行辦理區域技術援助 (regional technical assistance) 的一部分。該論壇旨在促進發展中成員國建立有效管理外匯存底框架，並與會人員得以藉由論壇議題增加外匯存底管理領域的專業知能共享及跨域學習。

本屆論壇總計 10 場會議，議題包括：全球及區域經濟及市場展望、當前市場環境下大型資產組合之管理、風險管理架構、從永續發展投資下的綠色和轉型籌資、中央銀行資產相關外部經理選任、主權資產和負債的調和、當前經濟環境下的債務管理政策、外匯投資管理前景、亞洲觀點下的中央銀行角色變化、公債發行的全球和地區觀點等 10 場次，有助於亞銀各會員國相關人員就外匯存底投資管理等相關問題交流討論，有助央行及相關部會人員瞭解當前重要財經議題俾利後續政策擬訂。

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壹、 背景說明及會議目的

亞洲開發銀行(下稱亞銀)每年定期舉辦外匯投資管理論壇(2022 Asian Regional Forum on Investment Management of Foreign Exchange Reserves)為該行辦理區域技術援助(regional technical assistance)的一部分。該論壇旨在促進發展中成員國建立有效管理外匯存底框架，並與會人員得以藉由論壇議題增加外匯存底管理領域的專業知能共享及跨域學習，另此論壇亦為亞銀各會員國中央銀行及財金部會等相關人員業務交流場域，討論外匯存底投資管理相關問題的發展。

2022年亞銀外匯投資管理論壇在新加坡金融管理局的支持下，於2022年10月26日至10月27日在新加坡舉行，為嚴重特殊傳染性肺炎(下稱COVID-19)疫情後，睽違兩年首次以實體形式舉辦。總計30個會員國派員參與本次論壇，我國由中央銀行外匯局賀副局長蘭芝及財政部國庫署陳簡任稽核怡臻代表與會。講者部分，除亞銀官員外，另邀請國際貨幣基金會(International Monetary Fund，下稱IMF)、世界黃金協會、道富集團、標普信用評等機構等相關領域專家擔任，共計10場會議，議題包括：全球及區域經濟及市場展望、當前市場環境下大型資產組合之管理、風險管理架構、從永續發展投資下的綠色和轉型籌資、中央銀行資產相關外部經理選任、主權資產和負債的調和、菲律賓、寮國、泰國、喬治亞等4國當前經濟環境下的債務管理政策、外匯投資管理前景、亞洲觀點下的中央銀行角色變化、公債發行的全球和地區觀點等10場次(議程詳附件2)。

本報告謹就上開場次中有關全球及區域經濟市場與展望、永續發展投資下的綠色和轉型籌資及公債發行的全球和地區觀點等3場次摘述部分內容，並提出心得與建議。

貳、 研討議題

一、 全球及區域經濟及市場展望

本場次討論全球經濟前景，並聚焦於亞太地區，包括近期全球重大事件，如：COVID-19 疫情發展及疫情後期對各國影響、俄羅斯入侵烏克蘭後升高的地緣政治風險、全球面臨通貨膨脹壓力暨美國聯準會對抗高通貨膨脹採緊縮貨幣政策引發全球效應、中國大陸持續嚴格的防疫政策造成供應鏈中斷等事件對於全球及區域經濟的影響。

(一)亞銀看法：

亞銀經濟顧問 Donghyun Park 博士說明，2022 年 10 月預估的經濟成長率均較同年 4 月預估數下修。2022 年 10 月預估 2022 年亞洲發展中區域經濟成長率為 4.3%(4 月份原預估 5.2%，下同)，2023 年為 4.9%(原預估 5.3%)；通貨膨脹預測部分，因能源及糧食價格上漲推升物價，2022 年預估 4.5%(原 3.7%)，2023 年預估 4.0%(原預估 3.1%)，故整體景氣在 10 月份時預估數均較 4 月時預估數較為悲觀。COVID-19 疫情雖可能延續，但在亞洲發展中國家致死率已下降(如圖 1)，除了中國以外，此區域其他發展中國家將推出更具彈性的防疫管制政策，故國門開放後供給面將藉由擴大製造及服務活動的量能而增加，需求面也因疫情放緩後消費及投資均可增加。預估此區域 2022 年的上半年外銷情況仍屬穩健，但若以台灣及南韓這兩大以電子零件出口為主的國家 2022 年 8 月外銷量明顯下滑的指標來看，2023 年以外銷電子零件為主的國家經濟前景可能面臨較大的不確定性(如圖 2)。

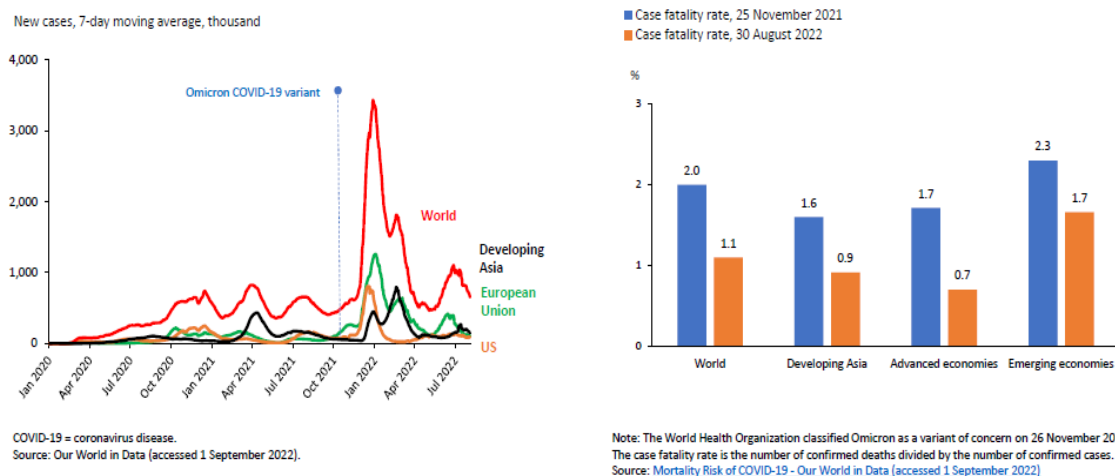


圖 1：全球及各區域每天新增 COVID-19 確診數(左圖)及死亡人數(右圖)

製造業出口訂單 (>50 改善; <50 惡化)

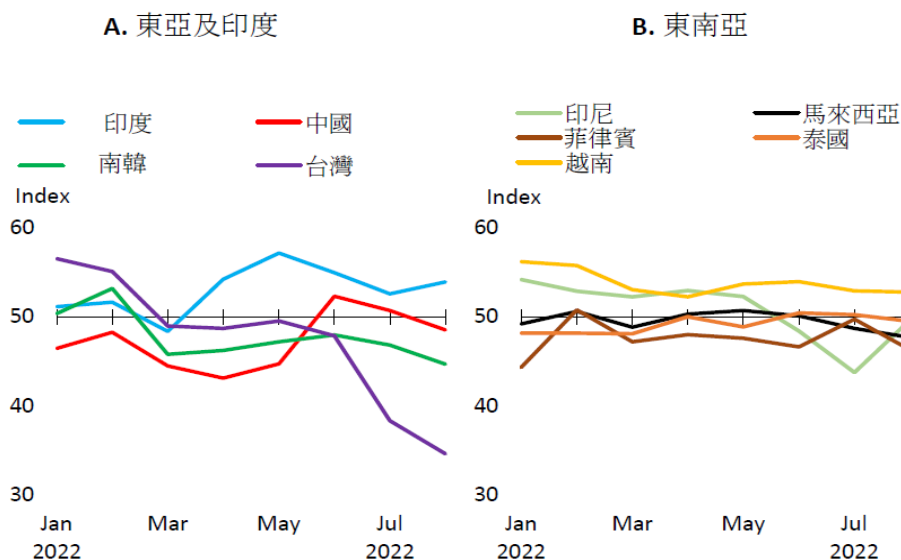


圖 2：亞洲地區製造業出口訂單情形

因此，亞洲開發中國家經濟前景受到以下因素面臨下行風險，包括(1)全球經濟急速反轉；(2)先進國家大幅度且難以預期的緊縮貨幣政策；(3)烏俄戰情變化；(4)全球商品市場外溢效果；(5)中國大陸經濟成長減速；(6)變種 COVID-19 病毒進展；(7)其他因素，如：個別國家債務狀況、國家脆弱性、地緣政治風險及氣候變遷等。然而，雖有以上的不確定因素，但亞銀對於亞洲大部分的開發中國家經濟前景仍持正面看法(除斯里蘭卡及巴基斯坦外)，尤其此區域如果屬於資通訊科技產業(Information and Communications Technology, ICT)相關供應鏈之國家，長期而言，具研發能力及彈性經營的新創事業將有機會為國家帶來新的技術進步進而形成強勁的成長動能。

(二)IMF 看法

IMF 駐新加坡代表官員 Natalia Novikova 女士認為，未來前景的不確定仍大，在較悲觀版本的情境分析下，2023 年全球經濟成長率將下滑至 2% 以下，並受全球三大經濟體(美國、中國及歐盟)影響，相關因素包括美國緊縮貨幣政策及強勢美元、中國大陸內需情形及歐洲能源價格三大因素。IMF 尤其關切中國大陸房地產開發商的信用狀況。受 COVID-19 疫情及其相關政策影響，中國大陸房屋銷售額急遽下滑，對房地產開發商的財務造成壓力，將牽連地區性及

小型銀行，因為這些銀行的資本額較低，且融資集中在以房地產相關的土建融比重較高，故宜注意房地產市場波動對消費者信心及是否連帶影響金融穩定(如圖 3)。

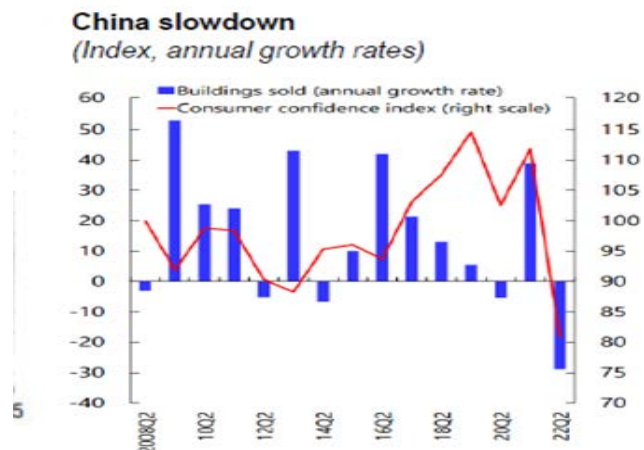


圖 3：中國大陸房屋銷售情形及消費者信心指數

二、 從永續發展投資下的綠色和轉型籌資-東協加三（下稱 ASEAN+3¹）國家永續發展債券(Sustainable Bond)市場發展

隨著全球重視可持續發展的經濟趨勢及效益，籌資方(各國政府，債券發行方)及投資方(各國中央銀行)對綠色及轉型融資關注程度與日俱增，逐漸將環境保護、社會責任及公司治理（下稱 ESG）列入債務發行及投資決策的考量面向。本場次由亞銀資深經濟學家 Shu Tian 博士分享永續發展債券在 ASEAN+3 國家的近期市場發展。摘述如下：

(一) 金融產業在邁向淨零過程中將面臨的機會與挑戰(綠色債券部分)

1. 轉型經濟：高碳價將會導致企業資源和創新活動重新配置，低碳活動的工作機會可望增加。
2. 機會：
 - 綠債供給面(債券發行方)：綠色轉型投資計畫需求多，資金需求龐大。
 - 綠債需求面(債券投資方)：更多穩定及長期的資金會流向綠能或環保等相關投資商品(實證上有可能產生負綠色溢價²，negative green premium，且發行綠色債券越頻繁將有助於降低資訊不對稱負綠色溢價越多)。

¹ 東協國家為東南亞國家協會（簡稱「東協」），係由印尼、越南、寮國、汶萊、泰國、緬甸、菲律賓、柬埔寨、新加坡、馬來西亞等東南亞十國合作機制，東協加三國則另加上中國大陸、日本和韓國等三個東亞國家。

² 綠色溢價：在滿足消費者同等效用的情況下，可實現低碳排產品與高碳排放產品之間的價格差。

- 整體市場發展：會有更多創新的投資工具，產生新的商品分類、新的商品生態系統、揭露及增加透明度作為；永續發展相關的有價證券將持續擴張，故未來會有更多轉型籌資相關的研究及探討。
3. 挑戰：
- 影響財務穩定度：資產將暴露弱點
 - (1)可能降低資產價值和品質：在推動淨零減碳過程中，尤其如果企業如身處碳排放較多的產業，對內營運成本增加、對外市場萎縮，利害關係人可能要求較高的風險報酬等因素，加劇現金調度的難度及財務的穩定度，整體資產價值及品質下降。
 - (2)氣候變遷面臨廣泛的政策、法律、技術和市場變化轉型風險，高碳排放資產成為擱置資產可能產生的風險。
 - (3)氣候變遷實體風險上升面臨相關項目的估值調整。
 - 影響價格穩定度：因以下價格變化導致物價上升
 - (1)高碳權價格
 - (2)綠色有價證券投資人需求對綠色商品需求增加
 - (3)氣候變遷產生的實體風險，如，極端氣候頻繁發生，推升糧食等商品價格
4. 伴隨機會的挑戰：承上，發展永續金融將同時帶動相關商品分類、資訊揭露、影響性評估等面向將會同時帶來發展機會及挑戰。

(二) 全球永續轉型意識高漲，永續發展債券市場加速發展

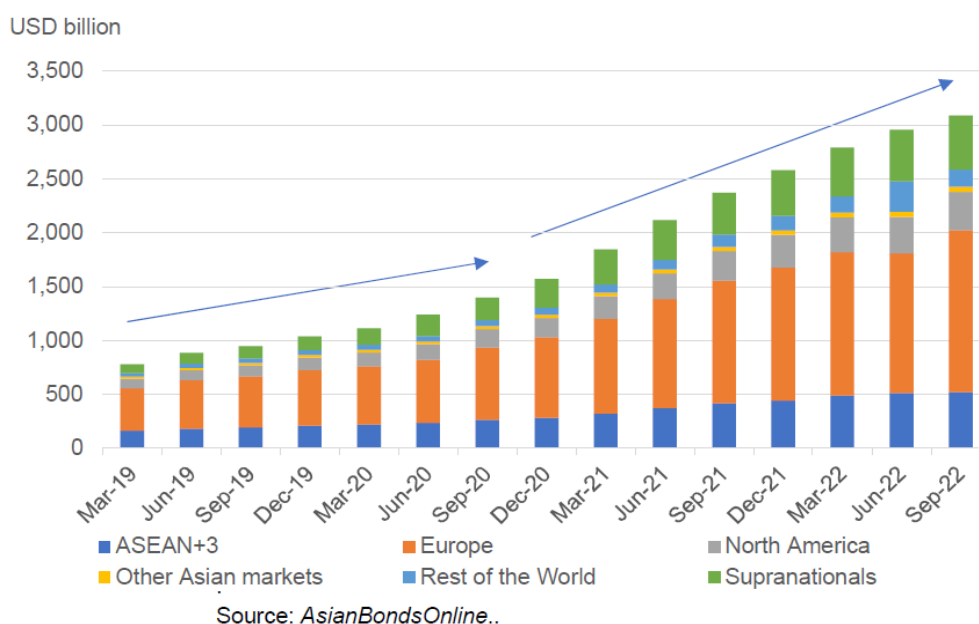


圖 4：全球永續發展債券餘額概況

如圖 4，全球永續發展債券市場到 2022 年 9 月未償餘額達到 3.1 兆美元，為 2019 年 1 兆美元規模的 3 倍，ASEAN+3(圖 4 藍柱)就占了整體永續發展債券市場的 16.9%。ASEAN+3 永續發展債券市場的債券種類也越來越具多樣性，從圖 5 代表集中度的赫芬達爾-赫希曼指數³下降即可看出(圖 5 紅點)。另截至 2022 年第 3 季，ASEAN+3 永續發展債券發行量占整體 ASEAN+3 債券發行量的 11.5%，占未償債券餘額的 8%。

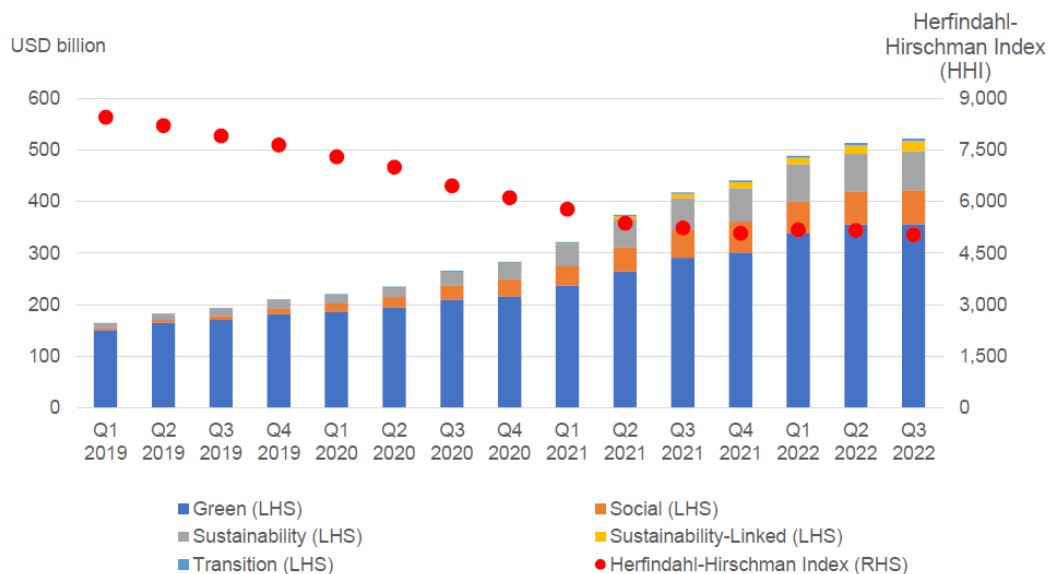


圖 5：ASEAN+3 地區永續發展債券未償餘額(按照發行類型)

就經濟體大小和債券發行類型來看，綠色債券及可持續發展連結債券以中國發行最多，社會責任債券則以日本及南韓發行最多(如圖 6)。

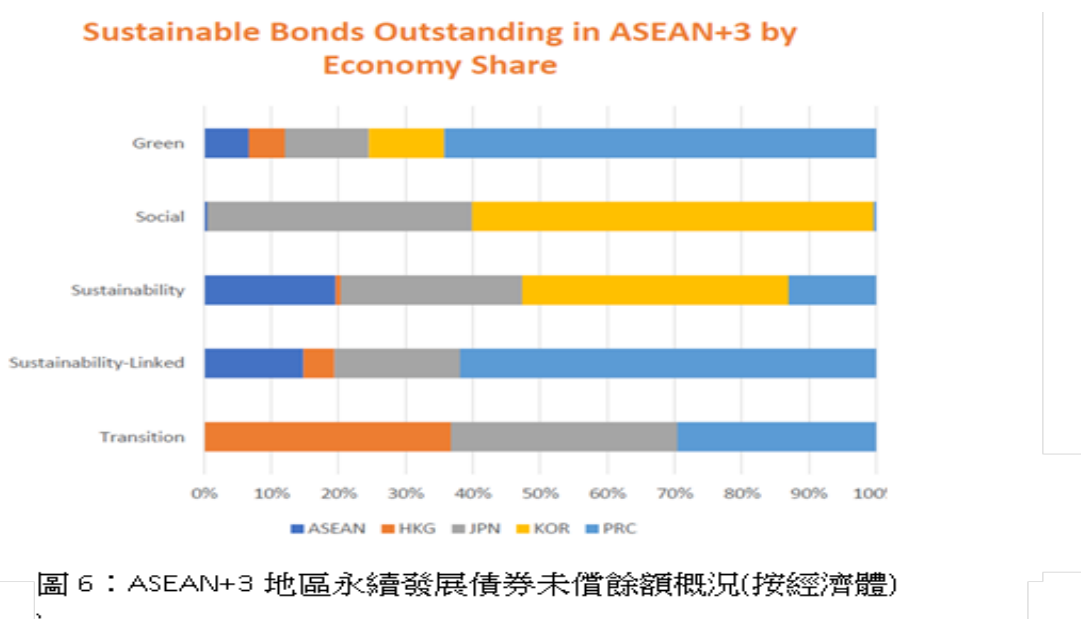


圖 6：ASEAN+3 地區永續發展債券未償餘額概況(按經濟體)

³ 解釋市場集中度指標之一，數字越大代表集中度越高。

Sustainable Bonds Issuance in ASEAN+3 with Sector Breakdown in Q3 2022 (share of total)

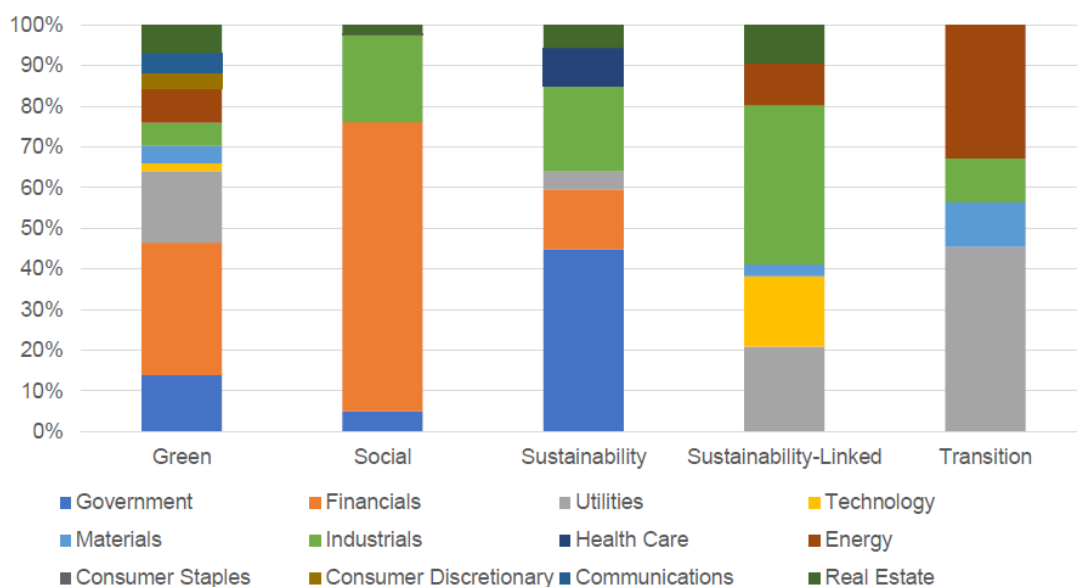


圖 7：至 2022 年第 3 季 ASEAN+3 地區永續發展債券發行概況(按發行人)

截至 2022 年 Q3，ASEAN+3 的私部門占整體永續發展債券發行量的 87.4%，且以金融機構發行為主，占私部門發行量的 37.9%(如圖 7)。年期部分，永續發展債券未償餘額平均年期為 4.4 年，整體 ASEAN+3 未償債券餘額平均年期為 7.5 年，故此區域永續發展債券偏好短期及中期年期，尤其 5 年以下，占 75.6%，相較歐盟永續發展債券，5 年以下年期債券僅占為 36%(圖 8)。幣別部分，61.0% 永續發展債券未償餘額係以當地貨幣發行，份額不高，以 ASEAN+3 整體債券市場來說，95% 以當地貨幣發行，反映出未來仍應持續吸引國內投資人將資金投入永續發展債券(圖 9)。

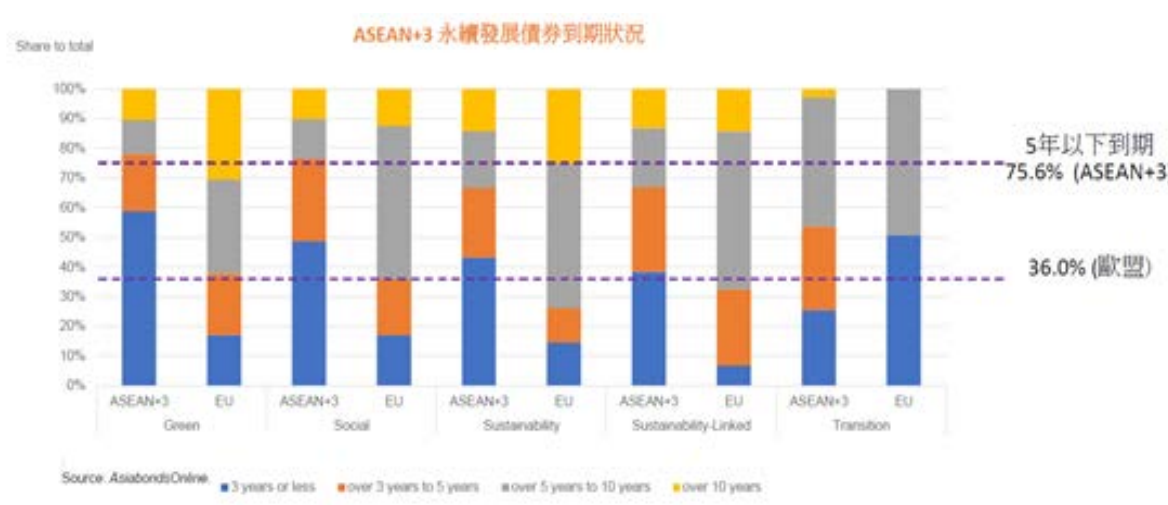


圖 8：至 2022 年第 3 季 ASEAN+3 地區永續發展債券發行概況(按到期日)

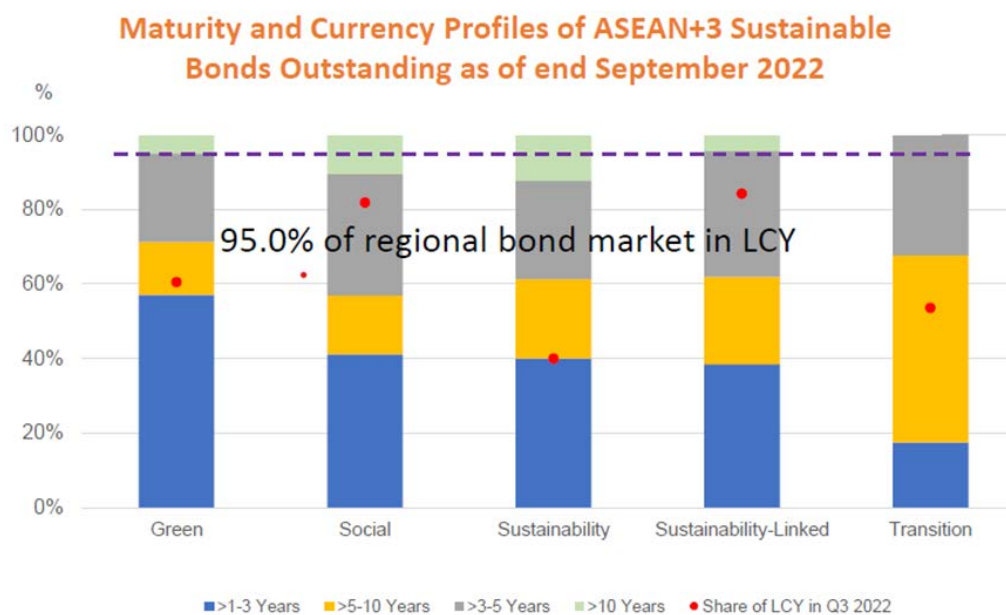


圖 9：至 2022 年 ASEAN+3 永續發展債券未償餘額(按到期及發行幣別)

(三) 永續發展債券概念認同度和實際投資量存有落差

1. 同前述，ASEAN+3 已有 95%的永續發展債券未償餘額係以當地貨幣發行，比重較歐盟為高(82.7%)，如以永續發展債券全部發行量看，ASEAN+3 以當地貨幣發行比重為 80.3%係以當地貨幣發行，而歐盟則為 90.8%，故此區域的投資人應有更大投資能量投入永續發展債券。
2. 根據 Bifinance 及 Willis Towers Watson 2021 年的調查發現，95%亞太的資產管理公司認為，永續發展目標會高度或溫和地影響他們的投資決策。達 31%亞洲投資人訂有永續發展政策聲明書，但如以他們實際的資產投資組合中，僅有 10%與永續發展政策相關。
3. 圖 10 為對印尼、馬來西亞、新加坡、菲律賓及泰國這 5 國的投資人對綠色債券的投資興趣及實際的投資行動調查。絕大部分的投資人仍停留探索及有興趣投資的範圍內，但實際將綠色政策目標政策列入投資人的投資委託文件或者目前已有綠色債券在投資組合中的投資人相當有限。
4. 圖 11 調查上述 5 國投資人投資綠色債券較少的原因，主要為綠色債券市場量不足或發行量太少。
5. 圖 12 可看出綠色主權債仍有極大發行空間。以 2022 年第 3 季來看，政府債券占開發中東南亞國家所有債券未償餘額量的 75.9%，但如單純永續發展債券的未償餘額來看，永續發展政府公債則僅占 11.3%，顯見政府發行永續發展債券將可讓此類債券發展速度加快，因此，發行流程、發行誘因及發行量都需要增加，以促進永續發展債券的發展。

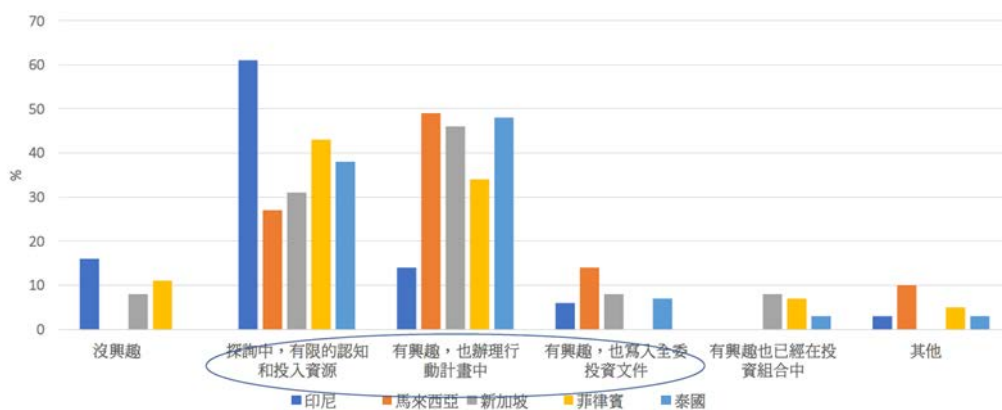


圖 10：5 國投資人對綠色債券投資興趣及投資行動調查

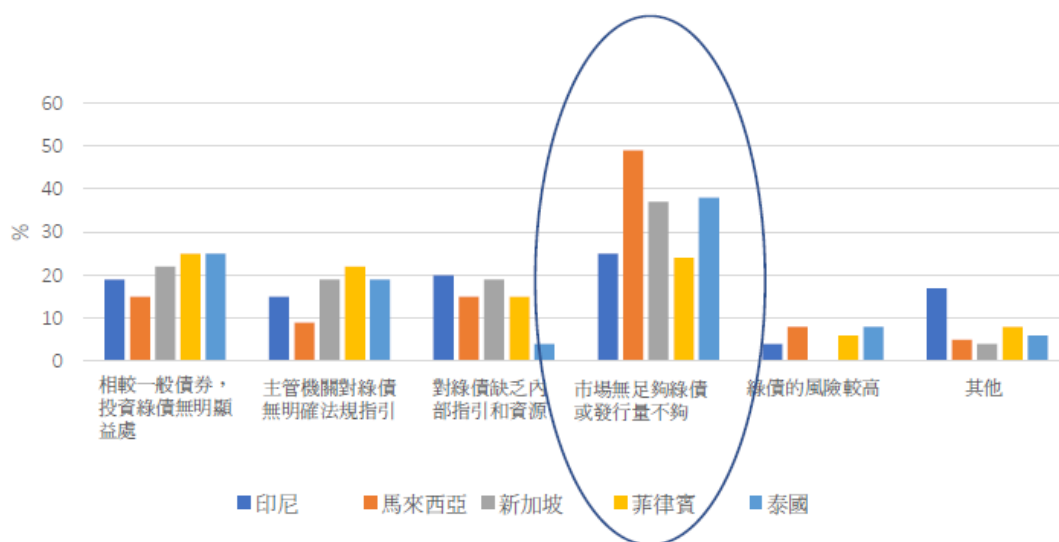


圖 11：5 國投資人對綠債投資較少原因

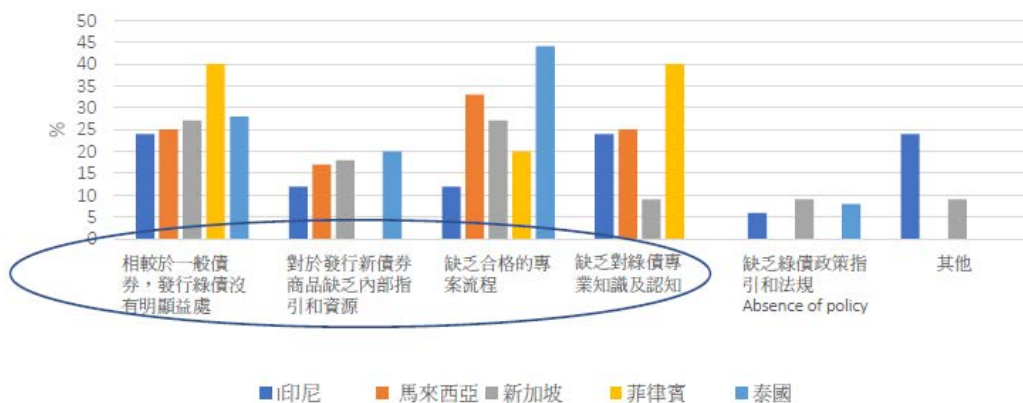


圖 12：5 國發行人對發行綠色債券困難原因

(四) 全球中央銀行為發展永續發展債券市場的關鍵

1. 如何支持永續發展債券發展作法：

- 領導永續發展債券分類：供所有的投資人辨認合格的專項計畫和資產。
- 共同發展永續發展債券市場的生態圈：促進永續發展債券透明度和可信度，以降低資訊成本和降低偽衝擊風險(impact-washing⁴ risk)，包括 1.外部審核和認證 2.強化 ESG 績效和風險的揭露及 ESG 影響力衡量方式。
- 增加訊息和知識布達，以增加投資人認同度和投資能量。

2. 如何促進永續發展債券市場供給及需求作法：

- 將氣候變遷風險導入央行總體審慎政策中，創造投資誘因。
- 規劃目標和優先性直接參與永續發展金融市場，如，考量對銀行採綠色信用政策或購買綠色資產等。

三、 從永續發展投資下的綠色和轉型籌資-印尼經驗：以公債實踐政府綠色永續發展的承諾

印尼熱帶氣候和群島景觀使為世界上生物多樣性最豐富的國家之一，同時也使該國容易受到氣候變化的不利影響，如：洪水和乾旱為印尼兩大主要災害。近年氣候變遷，對該國經濟已造成直接影響，凸顯該國的脆弱性，另地表溫度上升伴隨疾病增加和農產品生產力下降。故印尼政府自 2009 年起承諾減少溫室氣體排放，2016 年通過巴黎協定和國家自主貢獻(NDC)計畫，承諾印尼為全球碳排減量共同做出貢獻。以下為印尼財政部預算籌資暨風險管理總部副部長 Yuddy Hendranata 博士分享該國以公債實踐綠色永續發展承諾的經驗。

(一) 事前的優勢 (strength)、劣勢 (weakness)、機會 (opportunity) 與威脅 (threat) SWOT 可行性評估-以首次發行綠色伊斯蘭固定收益證券為例

優勢：(1)對抗氣候變遷決心；(2)政府(含國會)核准執行依據巴黎協定減碳政策；(3)發行伊斯蘭固定收益證券已有多年經驗。

機會：(1)可成為中央銀行投資組合選項之一；(2)全球永續發展債券市場發展；(3)伊斯蘭固定收益證券市場成長；(4)多樣化政府債務組合。

劣勢：(1)無執行永續發展政策經驗；(2)國內永續發展資本市場有限；(3)永續發展專案與現行預算體制不同；(4)沒有國內訂價指標。

威脅：(1)仍有其他類型債券發行需求；(2)作業成本高，包含事前及事後均需出具專業報告，期程冗長；(3)現任執政者任滿後續任者不一定支持。

(二) 全球永續發展債券市場背景

⁴銷售的產品引發實體經濟變化但沒有證據支持。

1. 對發展中國家發行之永續發展債券需求日增。
2. 預估到 2025 年，全球管理具永續發展評級機制的資產規模估計超過 53 兆美元（占整體資產管理規模 30%），永續發展債券市場將從 2.2 兆美元增加到 11 兆美元。
3. 綠色債券、社會責任債券及可持續發展債券總發行量預估到 2022 年底可望達 4 兆美元。

(三) 印尼政府對永續發展政策的承諾

依據 2030 年發展計畫，印尼政府具體承諾對抗氣候變遷並達成聯合國永續發展目標，相關法規業經 2017 年公布，2021 年並修正有關 2050 年低碳及氣候韌性的長期策略，2050 年新及再生能源目標應達 93%，2060 年達 100% (圖 13)

印尼政府碳中和承諾-2060淨零碳排

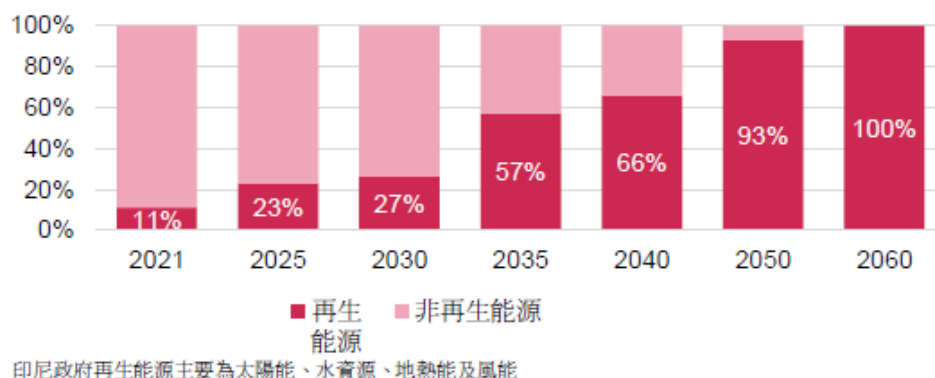


圖 13：印尼政府淨零碳排承諾

(四) 印尼永續發展目標政府有價證券架構(SDG Government Securities Framework)

1. 重要歷程

- (1)2018.1：發布綠色債券和綠色伊斯蘭固定收益證券架構，並由挪威環境諮詢機構國際氣候和環境研究中心(Center for International Climate and Environmental, CICERO)取得第三方意見(Second-Party Opinion)。
- (2)2018-2022：根據綠色債券和綠色伊斯蘭固定收益證券架構，接續發行 5 檔政府綠色伊斯蘭固定收益證券，其中 3 檔專售印尼本國人政府綠色伊斯蘭固定收益零售證券及 1 檔政府綠色國內伊斯蘭固定收益證券。
- (3)2021.8：提出永續發展目標(SDG)架構，以利後續發行綠色及藍色(伊斯蘭固定收益證券)債券⁵、社會責任債券和可持續發展(伊斯蘭固定收益證券)債券的決心。

⁵藍色債券是由政府、銀行或企業等所發行的債務工具，並將投資人的資金用在對環境、經濟及氣候有益的海洋相關專案上，促進海洋資源的永續性，或用來改善水資源管理。

(4)2021.9：發行 500 百萬歐元永續發展目標債券。

2. 架構的 4 大支柱

(1)支柱 1：資金專款專用-必須為新增或現有合格的永續發展目標支出。

(2)支柱 2：專案評估及選案(最重要)-以預算標籤(budget tagging)選擇合格的永續發展目標支出，以發行綠色或永續發展債券支應。

(3)支柱 3：資金用途管理-發行債券取得資金將存入印尼政府在中央銀行開立的帳戶中，需使用此項資金時，在穩健和審慎財政管理政策下，存入相關部會指帳戶，僅能用於當初永續發展目標架構設定可使用的項目。

(4)支柱 4：年度報告-每年撰寫配置報告和影響力報告(impact reporting)。

3. 和國際標準及原則一致：所有的綠色和永續發展有價證券的發行必須符合印尼永續政府有價證券架構及國際標準及原則一致(圖 14)。



圖 14：印尼政府相關國際標準

(五) 評估和選擇合格專案

印尼財政部管理政府現金收支調度，掌握各項支出運用及流向。由於支出運用為各相關部會的權責，故需跨部會的溝通合作始能讓永續發展公債順利發行。

(表 1 及圖 15)

表 1：氣候變遷和社會發展預算標籤規劃和預算循環流程

項目	部會
訂定目標-減碳及糧食安全	相關部會
制定工作計畫	發展規劃部及相關部會
規劃預算	相關部會
執行工作計畫和預算	相關部會
訂定明確減碳量和糧食安全的指標	發展規劃部、環保林業部及相關部會
氣候變遷碳排及糧食安全指標預算	環保林業部及財政部



圖 15：氣候變遷和社會發展預算標籤規劃和預算循環流程

(六) 實際案例

1. 永續交通系統

預期效益：(1)減少 1,415,718 噸二氧化碳的溫室氣體排放；(2)乘客平均通勤時間減少 30 分鐘；(3)乘客平均里程數增加 1.3 倍（預計逾 25 億乘客將由私人交通工具轉乘此項交通系統）。

2. 為高脆弱性地區降低災害風險以增強氣候變遷韌性之專項計畫

預期效益：(1)提供飲用原水(raw water)以供應 275.5 立方公尺的飲用水；(2)保護 1,920.4 公頃地區避免洪水侵襲；(3)恢復 134,700 公頃的三級灌溉網路；(4)開發其他水源地共 1,071 單位；(5)受惠人數 1,236,000 人；(6)開發或重建 12,000 公頃稻田。

3. 廢棄物轉製能源和廢棄物管理

預期效益：預計有 2,059,094 個家庭因廢棄物管理改善受益。

(七) 印尼政府綠色伊斯蘭固定收益證券及永續發展公債情形

1. 政府綠色伊斯蘭固定收益證券

全球市場(總發行額 50 億美元)		國內市場(總發行額印尼盾 16.2 兆元)	
發行年度	發行概況	發行年度	發行概況
2018	<ul style="list-style-type: none"> ➢ 票面利率 3.75% ➢ 發行年期 5 年 ➢ 發行金額 12.5 億美元 ➢ 29%綠色投資 ➢ 71%非綠色投資 	2019	<ul style="list-style-type: none"> ➢ 年報酬 6.75%(機動，最低) ➢ 零售，發行年期 2 年 ➢ 線上平台銷售 ➢ 發行金額 1.46 兆印尼盾

			<ul style="list-style-type: none"> ➤ 投資人數 7,735 人(38% 新戶)
2019	<ul style="list-style-type: none"> ➤ 票面利率 3.90% ➤ 發行年期 5.5 年 ➤ 發行金額 7.5 億美元 ➤ 29%綠色投資 ➤ 71%非綠色投資 	2020	<ul style="list-style-type: none"> ➤ 年報酬 5.50%(機動, 最低) ➤ 零售, 發行年期 2 年 ➤ 線上平台銷售 ➤ 發行金額 5.42 兆印尼盾 ➤ 投資人數 16,992 人 (25%新戶)
2020	<ul style="list-style-type: none"> ➤ 票面利率 2.3% ➤ 發行年期 5 年 ➤ 發行金額 7.5 億美元 ➤ 34%綠色投資 ➤ 66%非綠色投資 	2021	<ul style="list-style-type: none"> ➤ 年報酬 4.8%(機動, 最低) ➤ 零售, 發行年期 2 年 ➤ 線上平台銷售 ➤ 發行金額 5 兆印尼盾 ➤ 投資人數 14,337 人 (19%新戶)
2021	票面利率 3.55% 發行年期 30 年 發行金額 7.5 億美元 57%綠色投資 43%非綠色投資	2022	票面利率 6.79% 競標 發行年期 7 年 發行金額 4.4 兆印尼盾
2022	票面利率 4.70% 發行年期 10 年 發行金額 15 億美元 36%綠色投資 64%非綠色投資		

2. 2021 年印尼政府發行永續發展目標債券, 票面利率 1.35%, 發行年期 12 年, 發行金額 5 億歐元。投資人 84%歐洲、中東及非洲地區, 13%亞太地區, 3%美國。

(八) 挑戰及精進

1. 發行前挑戰	⇔ 處理作為
(1)準備架構 <ul style="list-style-type: none"> ➢ 定義明確的發行目的。 ➢ 規範合格的綠色和永續發展專案以管理資金、資金用途和報告。 	建立政府架構並尋求對外的技術支持。
(2)給投資人的基準 <ul style="list-style-type: none"> ➢ 建立確保透明度的架構。 ➢ 使用國際通用的發行原則(比如永續發展目標證券準則)。 	藉由獨立認證機構給予的第三方意見進行驗證(verification)或者外部的技術協助。
2. 發行後挑戰	⇔ 處理作為
擬具報告，包括管理資金的年度報告、資金用途和對環境及社會責任的影響評估。	<ul style="list-style-type: none"> ➢ 須和相關業務主管機關協調合作 ➢ 研議出能夠監督和報導產出、環境及社會影響評估的相關指標。 ➢ 尋求第三方意見/外部獨立審計單位。

3. 未來待精進

- (1)高度承諾和強化與利害關係人的協調，尤其提供影響力報告和避免專案重複。
- (2)目前發行綠色伊斯蘭固定收益證券和永續發展目標債券對發行方尚未產生價格優勢(綠色溢價)。
- (3)必須要系統性整合，數據可隨時查證回溯，以確認專案的實際影響性。
- (4)可考量發行藍色公債

四、 日本債務管理

日本債券市場為全球最重要的市場之一，且吸引許多國外投資人，以下為日本財務省債務管理局的債務管理政策組組長 YASUAKI INADA 先生分享日本債務管理，及該國發行日本公共部門債券(下稱國債)現況及未來債務管理作法。

(一) 2022 年日本中央財政預算狀況

1. 支出部分

項目	金額(10 億日圓)		占比
總支出	110,297.3		100.0%
(1)一般性支出(如：社會保障支出、國防支出等)	70,068.5		63.5%
(2)地方分配稅補助款等	15,882.5		14.4%
(3)債務支出(含還本及付息)	24,346.3		22.1%
	還本	16,073.3	
	付息	8,273.0	

2.收入部分

項目	金額(10 億日圓)		占比
總收入	110,297.3		100.0%
(1)稅課收入	65,235.0		59.1%
A.所得稅	20,382.0		18.5%
B.企業稅	13,336.0		12.1%
C.消費稅	21,573.0		19.6%
D.其他稅收	9,944.0		9%
(2)其他收入	5,435.4		4.9%
(3)債務舉借數	39,626.9		35.9%
	特別赤字融資公債	33,375.9	
	建設公債	6,251.0	

日本長期採擴大財政支出並以舉借做為財源，故由上述比重可看出，中央政府 2022 年收入預算來源除稅課收入占 59.1%外，其餘大部分財源來自舉債，占整體財源的 35.9%(我國 2022 年度總預算，稅課收入占整體收入比重為 81.11%，債務舉借數則占 1.87%)；又支出大部分用來支應一般性的政府支出，占比達 63.5%，地方分配稅補助款等占 14.4%，債務支出占 22.1%(我國 2022 年度總預算，債務支出占整體支出 4.59%，債務還本為 4.09%，一般補助及其他支出為 4.12%，其餘則為一般政務支出、國防支出等支出共占 90.91%)。

(二) 2022 年 6 月 7 日日本內閣通過的經濟及財政政策改革主要重點

1. 繼續現有財政整合目標：經濟是政府財政基礎，不應因現在(財政)狀況而偏離長期經濟政策，爰仍將持續振興經濟，並應觀察近期疫情及物價飆升情況對國內外經濟造成的影響。
2. 2023 年預算原則指引：持續穩健推動經濟及財政改革整合政策，及延續 2021 年基本政策方向
3. 2021 年基本政策：
 - (1)維持 2018 年基本政策的財政整頓目標(目標是在 2025 年實現各級政府基礎財政賸餘，逐步降低公共債務占 GDP 的比例)。
 - (2)從 2022 年到 2024 年，政府除繼續致力改革政府支出，並將根據以下基準編制預算：
 - ①社會保障支出政策目標：根據預測人口老齡化的速度增幅，維持此類實質支出增加。
 - ②除社會保障支出以外的一般支出：繼續擰節改善。
 - ③地方政府支出：與中央政府一般支出目標相同，並確保地方政府能取得穩健財政管理所需的收入來源，包括分配稅款等，應與 2021 年財政施政計畫規模相同。

(三) 債務管理概況

1. 日本中央公共部門債券(下稱國債)發行情形

如圖 16 可看出歷年日本國債發行數額，近年每年發行量均達 150 兆日圓以上，尤其 2020 年因應 COVID-19 疫情，政府採取防疫措施，舉債數隨同增加。以發行類型來看，則再融資債券發行比重較高。日本一般國債分為建設公債(支應政府公共建設支出)、特別赤字融資公債(支應政府非公共建設支出)、再建設債券(發行收入列入日本 311 大地震重建專戶)及再融資債券(專款用於償還建設公債及特別赤字融資公債)，另 FILP 機構債券為日本中央政府為財政投融資計畫發行之債券，用以支持中小企業、福利設施等用途，亦為日本國債之一，發行收入列入財政投融資計畫專戶專款專用。

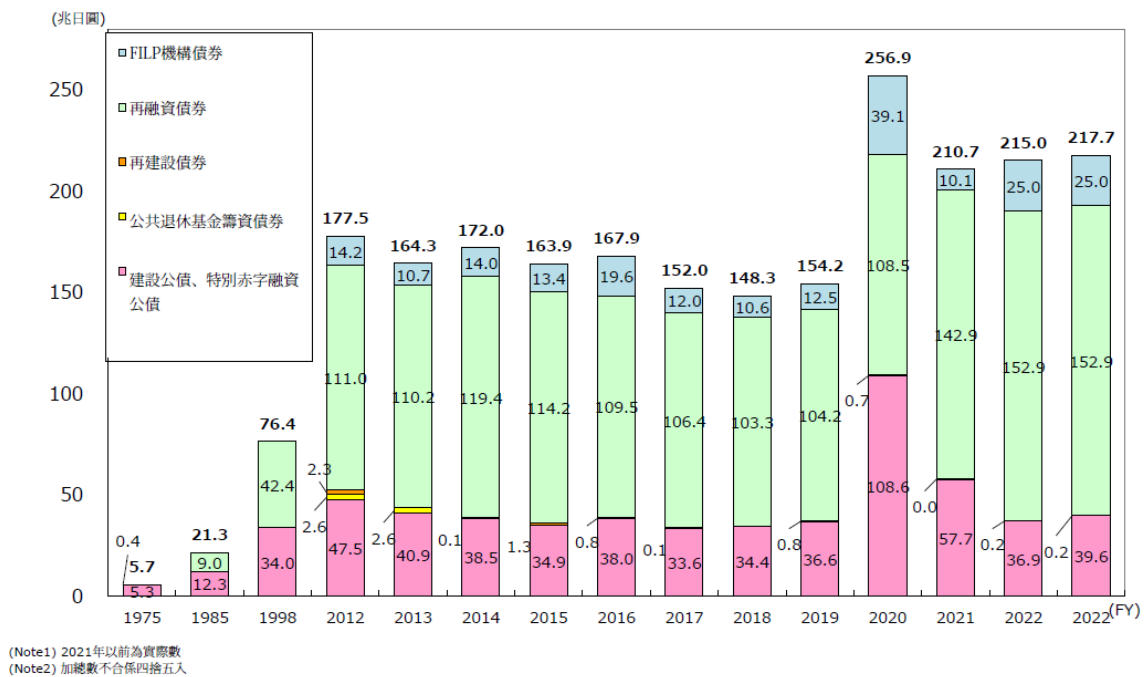


圖 16：歷年日本國債發行金額

2. 日本國債發行情形按發行債券種類(圖 17)

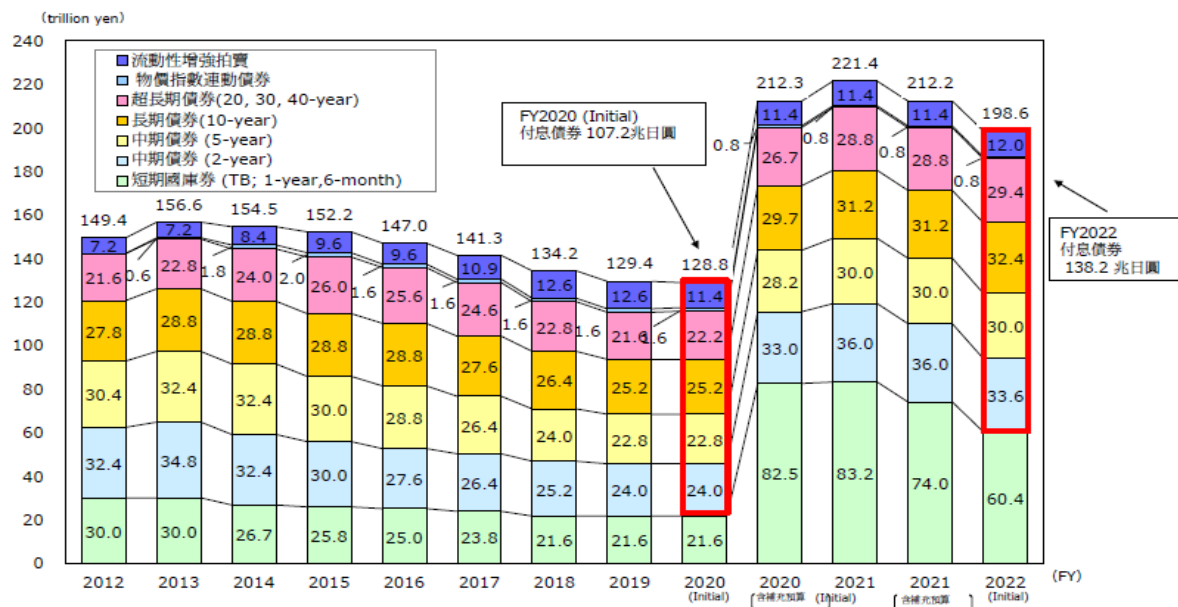


圖 17：歷年日本中央政府國債(按發行券種)

由圖 17 可看出以日本國債發行券種情形，中期債券與我國類同，以發行 2 年及 5 年券種為主，長年期則發行 20 年 30 年及 40 年期，另發行物價連動債券，及

流動性增強拍賣。流動性增強拍賣為日本政府為增加債券市場流動性而重新發行過去已發行之公債。

3. 2022 年日本國債發行計畫重點

- (1)相較於 2021 年，2022 年市場公開發行量減少 13.6 兆日圓。
- (2)短期債券(1 年以下國庫券)為債券市場重要部分，2021 年短期國庫券發行量為 74 兆日圓，約占整體債券市場總量的 35%，因此債息支出受利率波動影響甚大，減少短債發行將有助於穩定財政負擔。
- (3)反映市場要求：應長債需求增加，40 年期債券的規模增加 0.6 兆日圓，10 年期債券的規模增加 1.2 兆日圓，流動性增強拍賣增加 0.6 兆日圓，另考量 2 年期公債需求降低及到期年限短，發行量減少 2.4 兆日圓。

4. 短期國庫券和 1 年以上公債主要持有人情形

2022 年 7 月止，日本 1 年以上公債未償債券餘額中，49.6%為日本央行，19.6%為保險業者，14.4%為銀行業。短期國庫券未償債券餘額中，銀行業者持有 32.8%，外國人 57.1%，日本央行 8.9%。

5. 日本第 54 屆政府債務管理諮詢委員會就後疫情時代債務管理建議結論 (2021.6.24)

自 2004 年 11 月起，日本財務省成立政府債務管理諮詢委員會，邀請專家學者提出建言，尤其提出對中長期的政府債務管理政策。2021 年 6 月 24 日委員會所提出的討論議題：

- (1) 日本國債平均到期年限過短之修正。
- (2) 日本央行在日本國債市場影響力。
- (3) 維持並改善日本國債市場的流動性和功能性。
- (4) 更多元面向探討債務管理：包括國際金融環境、天然災害、地緣政治、網路攻擊和金融科技發展，加強運用人工智慧和大數據等。

6. 首次政府債務管理研究小組討論議題(2022.6.13)

自 2022 年 6 月起，日本財務省召開政府債務管理研究小組，聽取相關專家學者意見，使能由中長期的角度討論政府債務管理政策，包括技術性方面的建議。首次會議主要討論議題為：

- (1) 未來債息支出的量化分析研究(包括風險成本分析 Cost-at-Risk)。
- (2) 確保日本公債市場的流動性。
- (3) 日本公債市場系統設施發展(包括 Business Continuity Plan 營運持續計畫)，以避免外在不確定因素干擾業務營運，如：過去疫情期間因限制員工出勤或市場避

險巨量套現持有的資產等，應確認系統的持續性及安全性。

(4) 分析日本公債持有者的需求趨勢和結構。

7. 日本債務管理政策

➤ 基本目標

(1) 確保發行公債順利。

(2) 降低中期到長期融資成本。

➤ 基本作為

(1) 符合市場需求，維持市場發行定期性及透明度，以降低投資人風險。

(2) 持續與市場對話。

8. 日本財務省債務管理辦公室透由以下作法持續與市場參與者對話：

➤ 與主要公債交易商會談。

➤ 政府債務管理研究小組(如前述)。

➤ 國債投資人會議，參與者為主要機構投資人，如：保險公司、銀行、基金及資產管理公司等。

➤ 海外投資人關係經營：為促進外國投資人持有日本國債，自 2005 年 1 月起，日本財務省在歐洲、美國、亞洲等地區舉行投資人關係會議，向外國投資人推廣日本國債，及提供日本的經濟和財政狀況，以增加外國投資人對日本國債的了解。在外國投資人持有的日本國債中，以超長期日本國債和物價指數連動債券占比例較高。

➤ 與主要辦理零售國債投資人的經紀商會談。

參、心得與建議

亞銀外匯投資管理論壇自 2009 年起開始舉辦，提供亞太地區政府外匯存底管理人員間交流及經驗分享平台，以強化亞銀會員國之外匯存底投資及風險管理。謹將本次參加研討會之心得與建議，臚陳於下：

一、 瞭解經濟發展不同國家現況，多元學習專業知能

本次會議成員來自 30 個會員國，各國地理環境及經濟發展程度不同，故得以藉此會議經由不同會員國成員的分享，如：寮國及喬治亞等，瞭解該等國家現況及經濟環境。此外，出席人員包括中央銀行及財政部官員、國際組織專家及相關信用評等暨投資管理業者等，各自負責專業領域不同，可加強業務面向的專業知識，且經由會後與出席人員的交流，培養多元文化思維及國際素養。

二、 永續發展目標為全球共識，國內應跨部會共同推動

亞銀的外匯投資管理論壇主要係為各會員國中央銀行外匯管理目的設計講題，另包括國家債務管理及發行債券市場相關議題，以及當前國際社會關注重要事件等。氣候變遷及全球暖化等問題，為現今各國共同面臨的挑戰，永續發展目標已為全球共識，除民間部門外，未來政府勢需投入龐大資金實現淨零碳排放計畫，本次亞銀特別安排永續發展投資及綠色籌資議題，使與會者得以瞭解永續發展債券在亞洲市場發行的概況。

我國在 2022 年 3 月公布「臺灣 2050 淨零排放路徑及策略總說明」，預計 8 年間投入 8,800 億元預算至能源、產業、生活及社會 4 大轉型範疇之 12 項關鍵戰略，本部為負責國家建設及政務推動之財源籌措，故為實現上開轉型目標，自不能置身事外，且未來在籌措財源時，如規劃以永續發展公債之方式取得資金，有關專項計畫擬訂或控管、關鍵績效指標之訂定等，與環保及綠色能源等專業領域相關，又發行永續發展債券之办理流程等，涉及證券業務及資本市場發展，故建議後續對於發行永續發展政府公債，應本於行政一體之精神，整合跨部會資源共同推動，始能促進國內相關基礎建設推動，實現永續發展政策方向。

三、 多管道與公債參與者對話，吸引不同需求投資人

本次論壇日本財務省官員分享該國以多元之方式與市場對話，除定期與主要公債交易商會談以外，亦主動、不定期與主要國債機構投資人訪談，瞭解渠等對市場和國債發行年期及金額等方面的看法，以提供財務省官方掌握

並估測投資人和潛在投資人的需求。另為吸引各界投資人購買國債，亦會與主要代理國債零售的經紀商對話，感謝渠等為推廣非專業投資人投資國債的努力，並請經紀商持續宣導民眾購買國債，增加國債持有人多樣性。

本部為建立政府與公債市場參與者的對話機制，及為擬訂次一年度的發債計畫，每年均會邀請債券相關單位及部分公債交易商舉辦座談會，未來可增加其他形式的參與模式，以動態瞭解公債不同持有人之需求。此外，我國財政管理成效獲國際信用評等公司肯定，爰我國公債屬低風險金融商品，且為債券市場流通性最佳之券種，可為一般民眾儲蓄理財之工具，未來宜持續以多元管道宣導小額投資人購買公債，讓更多投資人持有公債且可引導大眾共同參與國家建設。

肆、 附錄

- 一、 與會人員名單(含報告所提之講者介紹)
- 二、 論壇議程



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DONGHYUN PARK

Economic Advisor for Strategic Knowledge Initiatives
Economics Research and Regional Cooperation Department
Asian Development Bank



Dr. Donghyun Park is currently Economic Advisor for Strategic Knowledge Initiatives at Economics Research and Regional Cooperation Department (ERCD) of Asian Development Bank (ADB), which he joined in April 2007. Prior to joining ADB, he was a tenured Associate Professor of Economics at Nanyang Technological University in Singapore. Dr. Park has a Ph.D. in economics from UCLA, and his main research fields are international finance, international trade, and development economics. His research, which has been published extensively in journals and books, revolves around policy-oriented topics relevant for Asia's long-term development, including innovation, entrepreneurship, green growth, population aging, and financial sector development. Dr. Park is Managing Editor of Asian Development Review, ADB's economics journal.



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NATALIA NOVIKOVA

Resident Representative in Singapore
Asia and Pacific Department, Monetary and Capital Markets Department
International Monetary Fund



Natalia is the IMF Resident Representative in Singapore covering macro-financial developments in ASEAN.

Before moving to Singapore in 2020, Natalia worked the IMF's European and Strategy Policy and Review Departments on debt sustainability and financial stability issues. She also participated in designing macroeconomic policies in a range of advanced, emerging, and low-income economies, including in the context of development and implementation of the IMF-supported programs. Prior to joining the IMF in 2013, Natalia was an Economist at Citigroup and a Lecturer and a Research Fellow at HSE University. She also worked at the Monetary operations department of the Central bank of Russia as well as PwC.

Natalia holds Master's Degree in Economics from Erasmus University, The Netherlands, and National Research University—Higher School of Economics, Russia.

Natalia Novikova is the IMF Resident Representative in Singapore covering macro-financial developments in ASEAN. Natalia has extensive experience in designing macroeconomic policies in a range of advanced and emerging economies, including in the context of the IMF-supported programs. Prior to joining the IMF in 2013, Natalia was an Economist at Citigroup and worked at the Monetary operations department of the Central bank of Russia, as well as PwC. Her research interests and publications include the analysis of sovereign debt sustainability, monetary policy, modelling of inflation and exchange rates.



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SHU TIAN

Senior Economist
Asian Development Bank



Dr. Shu Tian is a Senior Economist at the Economic Research and Regional Cooperation Department (ERCD) of the Asian Development Bank (ADB). Prior to joining ADB, she was an Associate Professor of Finance at Fudan University in China. Her main working area is financial sector development and sustainable finance. Dr. Tian works in the teams that produce ADB's flagship reports Asian Development Outlook and Asia Bond Monitor. Her team also works on bond market development in the ASEAN+3 economies under the Asian Bond Markets Initiative and maintains the AsianBondsOnline (<https://asianbondsonline.adb.org/>), an online information platform for ASEAN+3 bond markets.



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YUDDY HENDRANATA

Deputy Director – Financing Risk Analysis
Directorate of Budget Financing Strategy
And Portfolio
Directorate General of Budget Financing
and Risk Management
Ministry of Finance, Indonesia



Dr. Hendranata is the Deputy Director of Financing Risk Analysis within the Directorate General of Budget Financing and Risk Management, Ministry of Finance, Indonesia. Previously he was the Deputy Director of Investor Relations. His main responsibility is to formulate strategies in managing the risk of government debt portfolio including risk mitigation using hedging mechanism. He is also coordinating the technical team for Asset and Liability Committee to strengthen the implementation of government budget.

Currently, he works in expanding domestic investor bases, while promoting innovative and creative financing for strategic national projects in order to maintain the optimum debt portfolio as well as debt and fiscal sustainability. He holds a PhD in Economics from Claremont Graduate University, USA.



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YASUAKI INADA

Deputy Director
Financial Bureau, Debt Management Policy Division
Ministry of Finance, Japan



From July 2022 Mr. Inada is working as deputy director of the Debt Management Policy Division, managing investor-relations activities as well as legal issues concerning government debt management.

Prior to his current position, Mr. Inada has conducted regulatory reforms at the Financial Services Agency (2019–2020) and coordinated bilateral relations with foreign finance ministries at the International Bureau of MOF (2017–2018).

Holding a Bachelor of Laws from the University of Tokyo, Mr. Inada earned an MBA from Columbia Business School in 2022.



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AGENDA

Wednesday, 26 October 2022

8:30 am–9:00 am **Registration and Coffee**
Venue: Tower Ballroom Foyer

9:00 am–9:15 am **Group Photo**
Venue: Acacia

9:15 am–9:45 am **Keynote Address**
Ms. Roberta Casali, Vice President (Finance and Risk Management), Asian Development Bank
Mr. Rui Xiong Kee, Executive Director, Reserve Management Department, Monetary Authority of Singapore
Venue: Banyan

9:45 am–10:50 am **Session 1: Global & Regional Economic and Markets Outlook**
Format: Panel Discussion

Panelists:	Mr. Donghyun Park, Economic Advisor (Strategic Knowledge Initiatives), ADB
	Ms. Natalia Novikova, IMF Resident Representative in Singapore
	Mr. Ng Kheng-Siang, Head of Asia Pacific Fixed Income, State Street Global Advisors
	Mr. Ben Powell, Chief APAC Strategist, BlackRock Investment Institute

Moderator: Mr. Pierre Van Peteghem, Treasurer, Asian Development Bank

This panel discussion will focus on the global economic prospects, with emphasis on Asia and the Pacific region. It will cover major developments and their potential impact on economic growth – including recovery from the social and economic impacts of a pandemic that is by no means over, the Russian invasion of Ukraine which has heightened geopolitical risks and confounding the outlook for the world economy, monetary tightening by the United States Federal Reserve and adverse developments such as inflationary pressures and supply disruptions that are intensifying global uncertainty including a surge in commodity prices.

10:50 am–11:05 am **Open Discussion**

11:05 am–11:25 am **Coffee Break**

11:25 am–11:40 am **Audience Polling**

11:40 am–12:35 pm **Session 2: Managing Large Portfolios in the Current Market Environment**
Format: Presentation

Speakers:	Ms. Rini Kusumastuti – Head of Fixed Income and FX Portfolio Division, Reserves Management Department, Bank Indonesia
	Mr. Aram Sahakyan, Head of Global Markets Division, Central Bank of Armenia
	Ms. Min Jung Kim, Manager, Reserve Management Planning Team, Reserve Management Group, Bank of Korea

Moderator: Mr. Jonathan Grosvenor, Assistant Treasurer, Asian Development Bank



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Managers of FX Reserves and Sovereign Wealth Funds continue to face a difficult investment environment with a rise in global interest rates in developed economies to control a surge in inflation. In a climate of lower global growth, increasing geopolitical risks, and volatile FX markets, how should portfolio managers invest? How are these factors impacting capital flows, and are all emerging markets equally vulnerable? In this session, reserve and sovereign wealth fund managers share their insights and experiences in managing large investment portfolios.

12:35 pm–12:50 pm **Open Discussion**

12:50 pm–1:45 pm **Lunch**
Venue: Acacia

1:45 pm–2:25 pm **Session 3: Risk Management Framework**
Format: Presentation

Speakers:	Mr. Tarlan Rasulov, Director of Reserve Management Department, Azerbaijan
	Mr. Aleksandre Khazaradze, Head of Risk Management and Control Division, National Bank of Georgia

Moderator: Dr. Priti Sinha, Treasury Specialist, Asian Development Bank

A key focus for all FX reserves managers should be management of risk in the reserves portfolio. This requires a broad understanding and knowledge of broad risk management concepts such as the measurement of volatility and reserve portfolio sensitivities to changes in interest rates, currencies, and other asset classes. This session will introduce a discussion around risk management best practices and will also consider the practical issues around the organization, placement, and structuring of the risk management function within a central bank. There is an increasing focus on developing a more dynamic and robust approach to risk management covering not only market risks but also operational risks including the increasing threats from cyber-attacks. With increasing business complexity, globalization, and the exponential power of technology (reach and sophistication), operational risks in financial institutions have become far more important than ever. Speakers will present on among others, 1) governance in risk management; 2) developing indicators to manage event, political and other risks; 3) risk factor-based investing; 4) regulatory approaches to enhance central banks' cyber-security frameworks; and 5) the tools needed to evaluate independently and manage operational risks.

2:25 pm–2:40 pm **Open Discussion**

2:40 pm–3:35 pm **Session 4A: Green and Transition Finance for Sustainable Investing – Issuers' Perspective**
Format: Presentation

Speakers:	Ms. Shu (Grace) Tian, Senior Economist, ADB
	Mr. Yuddy Hendranata, Deputy Director, Directorate General of Budget Financing and Risk Management, Ministry of Finance of the Republic of Indonesia

Moderator: Mr. Deepak Taneja, Principal Treasury Specialist, Asian Development Bank

Debt management offices and central banks are increasingly focusing on green and transition finance as they become more conscious of the effects of the economic footprint and the benefits of integrating sustainability, mainly by adding ESG considerations into debt issuance and investment decisions. There



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has been much progress with the development of the sustainable bond market in Asia. However, this presents both challenges and opportunities that developing Asia and Pacific financial sectors face during the transition to net zero emissions. This session will set out recent developments with transitioning to green financing, the development of green and other sustainable development government bonds, and the potential for further development of the markets to meet ESG considerations.

Open Discussion

3:35 pm – 3:50 pm

Coffee Break

3:50 pm – 4:10 pm

Session 4B: Green and Transition Finance for Sustainable Investing – Investors’ Perspective

Format: Presentation

4:10 pm – 5:05 pm

Speakers:	Mr. Tobias C. Hoschka, Assistant Treasurer, Financial Policy and Planning Division, ADB
	Mr. Francois Haas, Chief Representative, Asia Pacific, Banque de France Asia Office
	Dr. Xinting Jia, ESG Investment Strategist, Asia Pacific, State Street Global Advisors
	Mr. Abhishek Dangra, Senior Director, Sector Lead, Infrastructure, S&P Global Ratings

Moderator: Mr. Jonathan Grosvenor, Assistant Treasurer, Asian Development Bank

Central banks are increasingly focusing on green and transition finance as governments look to meet the targets that they have set for reducing net zero carbon emissions. While climate change is not a policy matter for central banks to address, a key question is whether central banks should be looking more actively to favor green assets in their FX reserves portfolio as climate change has significant, pervasive effects which can impact on all of the primary objectives of a central bank and therefore they will have no choice but to take climate change into account. In addition, central banks are showing a growing interest in issues of market transparency in green finance, particularly regarding taxonomies, green external review and assessment, and climate transition metrics, frameworks, and market products. Taxonomies are classification systems that define criteria to identify assets, projects and activities with environmental benefits or costs. They are an important tool for achieving high-level environmental objectives such as those established by global accords or national environmental or sustainable development policies. Sustainable investment which encapsulates ESG integration and corporate engagement is also gaining traction. This session will set out recent developments with transitioning to green financing and the impact that this is having on the investment strategies of central banks as well as motivations to follow sustainable investing.

5:05 pm–5:20 pm

Open Discussion

5:20 pm–6:15 pm

Session 5: Engaging External Fund Managers

Format: Presentation

Speakers:	Mr. Kimty Kormoly, Deputy Director General, Central Banking Directorate, National Bank of Cambodia
	Ms. Olga Kutaladze, Head of International Reserve Management Division, National Bank of Georgia
	Ms. Danielle R. Espiritu, Assistant Chief Reserve Management Officer, Financial Markets, Bangko Sentral ng Pilipinas



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Moderator: Ms. Penelope Stafford, Assistant Treasurer, Asian Development Bank

As central banks diversify their reserves into increasingly complex asset classes it is natural to draw on the services of external asset managers. External service providers also play important roles as custodians, advisors, and auditors. It is essential that central banks manage relations with external service providers effectively, which can be a costly and time-consuming exercise. What has the experience been with external fund managers (EFM)? What is the optimum way to leverage them, and for which asset classes? What is the appropriate mandate for EFM? In this session, we identify best practices in managing relations with private-sector partners, with an emphasis on how to reduce the cost of doing so.

6:15 pm–6:30 pm **Open Discussion**

7:15 pm–9:00 pm **Dinner**
Venue: Acacia
Dress Code: Casual

Thursday, 27 October 2022

8:30 am–9:00 am **Registration and Coffee**
Venue: Tower Ballroom Foyer

8:45 am–9:45 am **Session 6: Sovereign Asset & Liability Coordination**
Format: Presentation

Speakers:	Mr. Giorgi Laliashvili, Head of Financial Markets, National Bank of Georgia
	Mr. Zandy Akbar Rassat, Deputy Director for Multilateral Loans and Grant, Directorate of Loans and Grants, Directorate General of Budget Financing and Risk Management, Ministry of Finance of the Republic of Indonesia
	Ms. Aisyah Mayuliani, Head of Section of Bilateral Loans and Grants 2D, Directorate of Loans and Grants, Directorate General of Budget Financing and Risk Management, Ministry of Finance of the Republic of Indonesia

Moderator: Mr. Tobias Hoschka, Assistant Treasurer, Asian Development Bank

Important sovereign assets and liabilities, such as international reserves, sovereign wealth funds, financial asset and public debt, are typically managed by different institutions—central banks, fund managers and ministry of finance—with each having their own policy objectives and institutional arrangements. This session will focus on the coordination between all agencies managing the government’s portfolio of financial assets and public debt and what are the main challenges coordination, oversight and governance.

9:45 am–10:00 am **Open Discussion**

10:00 am–10:20 am **Coffee Break**

10:20 am–11:35 am **Session 7: Effective Debt Management Strategies in Current Macroeconomic Conditions**



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Format: Presentation

Speaker:	Mr. Erwin Sta. Ana, Deputy Treasurer, Bureau of Treasury, Department of Finance, Philippines
	Mr. Soulivath Souvannachoumklam, Director General, Public Debt Management Department, Lao, PDR
	Mr. Paroche Hutachareon, Senior Expert on Bond Market Development, PDMO, Thailand
	Mr. Irakli Katcharava, Head of Public Debt Management Department, Ministry of Finance, Georgia

Moderator: Ms. Lei (Annie) Wang, Principal Treasury Specialist, Asian Development Bank

Debt management offices are continuing to face many challenges, particularly with increased uncertainty in the global financial markets and in some countries, higher debt levels. Debt managers may therefore face additional funding pressures to meet government financing requirements particularly for infrastructure development requirements and growth targets. Against this backdrop, debt managers have seen a sharp increase in interest rates driven by the US Federal Reserve. Some countries are reaching levels of debt that are approaching or exceeding debt sustainability thresholds. This session will draw on the experiences of experts from a selection of debt management offices to outline the challenges that they each are facing in the current global environment.

11:35 am–11:50 am **Open Discussion**

11:50 am–12:45 pm **Session 8: Outlook for the Investment Management of Reserves**

Format: Presentation

Speakers:	Ms. Charity S. Malto, Chief Investment Analytics Officer, Financial Markets, Bangko Sentral ng Pilipinas
	Mr. Christopher Chan, Chief Investment Officer, Public Markets, Hong Kong Monetary Authority (TBC)
	Mr. Shaokai Fan, Global Head of Central Banks, World Gold Council

Moderator: Mr. Deepak Taneja, Principal Treasury Specialist, Asian Development Bank

In this session, we consider the current trends and challenges for reserve managers in Asia. This session will cover:

- *Reserve accumulation in Asia*
- *Appropriate balance between risk and return, degree of public disclosure*
- *Integrating environmental, social and governance (ESG) criteria—having a meaningful impact on risk and return outcomes*
- *Gold as a reserve asset*
- *Applying big data, artificial intelligence, and machine learning to investment management*

12:45 pm–1:00 pm **Open Discussion**



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1:00 pm–2:00 pm **Lunch Break**
Venue: Acacia

2:00 pm–2:45 pm **Session 9: Conversation: Changing Role of Central Banks – An Asian Perspective**
Format: Conversation

Speakers:	Mr. Diwa C. Guinigundo, former Deputy Governor, Bangko Sentral ng Pilipinas
	Mr. Giri Koorniaharta, Group Head, Reserves Management Department, Bank Indonesia

Moderator: Ms. Sukhumarn (Pinky) Phanachet, Deputy Treasurer, Asian Development Bank

Central banks play a crucial role in ensuring economic and financial stability. Since the global financial crisis, central banks have expanded their toolkits to deal with risks associated with financial instability and volatile exchange rates. In a climate of intensifying geopolitical risk, slowing global growth, looming trade tensions and effects of unconventional monetary policy, we have a seasoned former Central Banker providing an Asian perspective on the changing role of central banks.

2:45 pm–3:00 pm **Open Discussion**

3:00 pm–3:20 pm **Coffee Break**

3:20 pm–4:50 pm **Session 10: A View from the Issuance Side**
Format: Presentation

Speakers:	Mr. Siegfried Ruhl, Hors Classe Adviser, Directorate General for Budget, European Commission
	Mr. Ian Clunies-Ross, Head, Investor Relations, Australian Office of Financial Management
	Mr. Yasuaki Inada, Deputy Director, Office of Debt Management and JGB Investor, Debt Management Policy Division, Financial Bureau, Ministry of Finance, Japan
	Mr. YeeFarn Phua, Director, Asia Pacific Sovereign Ratings, S&P Global Ratings

Moderator: Dr. Priti Sinha, Treasury Specialist, Asian Development Bank

In this session, our speakers will provide a global and regional perspective and comment on developments around the issuance of bonds, the evolution of sovereign ratings and impact of changes in bank and financial market regulation on primary and secondary debt markets. What does this mean for investors? Will liquidity in government and corporate bond markets be affected? What can issuers do to make their bonds more attractive to central banks, sovereign wealth funds, and institutional investors? How are ESG factors going to affect sovereign issuers? This session will also cover ratings outlook for selected sovereigns.

4:50 pm–5:05 pm **Open Discussion**

5:05 pm–5:15 pm **Closing Remarks**
Mr. Pierre Van Peteghem, Treasurer, Asian Development Bank