# 行政院所屬各機關因公出國人員出國報告書(出國類別:參加國際會議)

## 出席亞太經濟合作組織(APEC) 國庫系統現代化研討會會議報告

服務機關:財政部

姓名職稱:財政部國庫署署長 凌忠嫄

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出國期間:101年3月24日至3月29日

報告日期:101年5月

## 出席亞太經濟合作組織(APEC) 國庫系統現代化研討會會議報告

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## 出席 APEC 相關會議簡要報告

會議名稱	APEC 經濟體國庫系統現代化研討會
(含英文縮寫)	Seminar "Modernization of Treasury Systems in APEC
	Economies"
會議時間	民國 101 年 3 月 25、26、27 日
所屬工作小組	APEC 財長系列會議
或次級論壇	
出席會議者姓	財政部國庫署
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會議討論要點	一、 本次會議主要係檢視亞太地區經濟體之國庫系統發
及重要結論	展情形,透過各經濟體之推動成果以分享有用之經
(含主要會員體	驗。本會議由俄羅斯聯邦財政部首長 Mr.Roman E.
及我方發言要	Artyukhin 擔任主席,共計 12 個經濟體派代表出席,
點)	並循例邀請世界銀行(World Bank, WB)、APEC 秘書
	處及國際貨幣基金(IMF)等組織代表參加。
	二、 本次研討會透過四場會議,討論議題包括「國庫及
	政府財務管理資訊系統發展趨勢」、「財務管理資訊
	系統之發展」、「現金管理」及「國庫及政府財務管
	理資訊系統在東亞經濟體之發展現況」等四項議
	題。議題研討之進行,除由世界銀行代表闡述該組
	織多年來對國庫系統發展之投入及研究成果外,主
	辨國俄羅斯,與新加坡、泰國、中國大陸、韓國、
	越南、印尼等均分別提出相關報告,就各經濟體之
	經驗及成果充分交流。
	三、 就「現金管理」議題,我國積極參與本次研討,主

動擔任演講人,透過我國財政狀況之介紹,說明我 國現金管理之發展,包括現金管理之目標、架構、 作為、成效等,分享我國發展經驗及現行作法。

四、本次研討會對於財務管理資訊系統(Financial

Management Information System, FMIS)建置及現金管理之重要性及其成效均獲得與會經濟體之認同,多數國家均已依其國家規模、政府體制及管理需要,逐步推動建置相關系統,期能整合政府整體財政資訊,提升資訊運用範圍廣度及深度。透過各國發展之經驗分享及世界銀行提出之研究報告,將可作為各 APEC 會員於建置財務管理資訊體制之參考。

#### 後續辦理事項

#### 無

#### 檢討與建議

經參採世界銀行之研究及各國經驗分享,就我國之現行體 制及作法,提出檢討心得如下:

一、 我國現金管理架構係以符合國際間一致性標準為原 則獨立建置,並有效運作:

健全的政府現金管理,可透過有效的收支體系,以最低資金成本,靈活運用政府資金,充分支應政務推動。我國現金管理架構發展多年,雖從未經由世界銀行等國際機構取得技術或資金援助,惟我國均參採國際相關理論及實務經驗,作為體制及作業發展之參考,不論是庫政體系、資金運用、債務管理等,相較於各國情形,我國仍具有相當之水準。

依據世界銀行對於政府良好現金管理的標準應 具備之九大特點,除具備資訊即時共享機制外,其 餘八項我國均已具相當程度,包括:現金額度採行 集中管理及國庫單一帳戶、對於整體現金規劃架構 之涵蓋範圍具備明確認知及瞭解、具備準確預測短 期現金流入和流出之能力、建置適當的交易處理及 會計作業架構、適當的權責分工、運用現代化銀行 及支付結算系統、運用各項金融市場短期工具以靈 活現金管理、整合債務和現金管理等。

由於我國財務管理資訊系統包括預算作業、財政管理及庫政系統,分屬由行政院主計總處、財政部及中央銀行各自依所屬權責及管理需求開發運用,資訊之整合程度相對較低,部分資訊重複建置,且需運用人工作業加以彙集分析,因此資訊運用效能尚有提升空間。如能加強資訊整合及即時共享機制,我國現金管理整體架構及運作將可完全符合先進管理體系之標準,並充分落實政府現金管理之運作目標。

## 二、 發展健全 FMIS 需有明確目標及作業期程,以利逐 步推動及落實執行

健全及完善的 FMIS 係政府財務管理之一系列 自動完整解決方案,使政府財務資訊能涵蓋計畫、 執行及考核預算等各個階段,並透過系統運用資訊 自動整合及回饋機制,有效作為預算籌編之評估、 預算執行之監督,與會計作業之執行、決算報表之 編製及績效考核之依據等。透過完整財務資訊系統 之建置及運用,將有助於各項財政措施之擬定及執 行,對於政府財政健全之發展具有極大之效益。

依據本次會議各國提供多年來推動發展 FMIS 計畫之經驗發現,其發展須有明確的目標及作業期 程,且推動期程均需費時多年,包括:

- 初期規劃:依據各國之組織編制及管理需求,擬 訂系統整體目標,整合資訊技術及人力資源等相 關先決條件,以規劃推動作業期程。
- 2. 推動過程:確實依期程達成階段進度,充分提供 訓練課程,以協助系統參與、運用人員瞭解系統 目標及作業方式,有效落實系統運作,並於各期 程推動階段即時檢討執行成果,以減少建置期間 發生成本超支、延期及無法達成預期目標之風險。

由於 FMIS 係為整體政府財務資訊整合,其涵蓋 面非僅僅以財務或現金面為限,且政府整體政務推 動,係各機關依權責職掌分工執行,因此完善之 FMIS 架構非僅為財政管理部會之職責,係跨部會、 跨機關之系統運作,由各中央部會共同投入及參 與,方能使系統功能完備及運作順利。為利各項財 務資訊管理功能得以有效整合及確實發揮成效,在 推動規劃時,透過政府較高層級之承諾支持,並設 定短期、中期及長期之預計目標及達成效益,定期 檢討執行進度與成果,將有助於計畫之落實執行。

為利我國財務資訊管理運用及現金管理更趨健全,並符合 先進標準,對於我國之現行作法提出建議事項如下:

一、 推動我國的整合性財務管理資訊系統

鑒於整合性財務管理資訊系統可擴大政府財務 資訊運用廣度及深度,有效協助政府合理配置財政 資源、追蹤預算執行進度及落實工作計畫績效考 核,對於提高政府財務資源之管理效益具有極大之 助益,因此系統建置需以政府規模為整體考量,雖 需投入龐大成本及人力,並需有計畫性規劃推動, 但各國均積極投入發展,期能透過財務資訊整合, 有效提高政府財務效能,達成財政管理之健全。

我國現行業建置之各項財務管理資訊系統,分 由行政院主計總處、財政部及中央銀行各自就所屬 業務開發資訊管理系統,惟整合不足,因此跨部會 財務資訊之整合仍有改善之空間。包括:

- 1.行政院主計總處:為預算作業開發之「政府歲計會 計資訊管理系統」,自 93 年迄今,其間不斷改進 增修,目前功能涵蓋自預算籌編、預算控制、普 通會計、決算編製等子系統,作業方式係由各預 算執行機關登錄上網輸入相關作業資訊,系統可 自行產製傳票及報表等,簡化人工作業,其中預 算控制部分,系統並彙整各機關之分配預算,傳 輸轉檔供台北區支付處做為控制各機關預算支用 限額之依據。
- 2.財政部台北區支付處:建置國庫資訊管理系統,功能包括國庫收支資訊、大額支出即時查詢等,因我國之國庫現金係採國庫單一帳戶(國庫存款戶),國庫存款戶內之機關支用,均以付款憑單送支付處辦理庫款撥付作業,經支付處審核其授權條件及預算額度無誤後辦理支付,現行支付方式包括通匯(約占90%,委託財金資訊股份有限公司辦理)及支票(約占10%,委由中央銀行辦理),支付處每日彙集庫款支出資訊,並透過中央銀行將國庫收入及庫款餘額等資訊傳輸轉檔後,產出國

庫收支日報表,國庫存款戶內之各預算機關可透 過帳號及密碼登入,查詢機關收支狀況及作為財 政部國庫署辦理國庫現金管理每日執行狀況之依 據。

- 3.中央銀行:我國現金採國庫單一帳戶,由中央銀行辦理出納、存儲事宜,中央銀行開發建置國庫收支連線系統,每日彙集中央銀行及轉委託金融機構之國庫收入繳庫、退回等狀況,透過區域網路以帳號密碼登入,可供財政部國庫署查詢每日國庫收入明細資料。
- 4. 財政部國庫署:為債務管理之目的,開發債務管理資訊系統,以利債務餘額查詢、到期債務還本等管理需求,與為國庫現金管理目的,建立之簡易國庫現金估測作業等。

上開系統皆屬政府財務管理之一環,缺一不可,雖功能完備,惟分屬不同機關及不同架構,在 財務管理資訊之運用上,須以人工透過不同系統之 查詢始窺全貌,且部分功能亦可互為應用,如能將 系統功能予以整合,可結合收支交易之執行、紀錄、 控管、考核及報表分析等功能,減少資料重複登載, 將有利增進整體政府財務資訊之運用完整性及即時 性,提升財務決策之效率及品質,強化政府財務管 理之功能。

#### 二、 強化現金管理估測資訊自動運算功能

我國現金管理係屬財政部之權責,現行架構透 過相關財務管理資訊系統之運用,國庫現金收支及 餘額估測機制得以有效運作,除辦理每日、每月、 每季之估測,並依據各項最新資訊予以即時更新, 透過估測之結果適時擬定各項資金運用策略,包括 融資措施及提前償還債務等規劃,並配合公債及國 庫券定期適量發行計畫,兼顧積極提升國庫資金之 運作效能及健全金融市場之發展等目標。

惟目前我國現金管理之估測作業,受限於各項 政府財務資訊係依不同權責及功能獨立開發,並無 整合性資訊系統支援,國庫現金管理作業多數以人 為方式辦理資訊蒐集、整合、估算及報表編製,致 國庫現金估測之準確度有賴於人員素質及收支單位 之配合等相關因素。為強化現金估測之準確度,以 利提升國庫資金管理之決策品質,並降低資金成 本,對於現金估測資訊之作業程序,可建立系統化、 電腦化之現金估測模型,運用系統對於現金調度資 訊之彙整功能,包括歷史收支資料之趨勢分析、年 度預算之額度、即時大額收支之通報與查詢、債務 管理資訊之連結、中央統籌分配稅款之撥付時程及 金額等,透過系統自動擷取及整合各項資訊後,經 以自動運算產製現金收支估測,將可擴大政府財務 資訊可運用範圍及價值,提高現金估測資訊來源完 整度、降低人為主觀判斷及計算錯誤等風險,對於 政府現金管理將有正面之效益。

## 出席亞太經濟合作組織(APEC) 國庫系統現代化研討會會議報告

## 出席亞太經濟合作組織(APEC) 國庫系統現代化研討會會議報告

#### 壹、背景說明與目的

亞太經濟合作組織(Asia Pacific Economic Cooperation, APEC)國庫系統現代化研討會於 101 年 3 月 25 日至 27 日在俄羅斯喀山舉行,本次會議主要係檢視亞太地區經濟體之國庫系統發展情形,透過各經濟體之推動成果以分享有用之經驗。本會議由俄羅斯聯邦財政部首長 Mr.Roman E. Artyukhin 擔任主席,共計 12 個經濟體派代表出席,並循例邀請世界銀行(World Bank, WB)、APEC 秘書處及國際貨幣基金(IMF)等組織代表參加,本部係由國庫署凌署長忠嫄代表出席。

本次研討會透過四場會議,討論議題包括「國庫及政府財務管理資訊系統發展趨勢」、「財務管理資訊系統之發展」、「現金管理」及「國庫及政府財務管理資訊系統在東亞經濟體之發展現況」。藉由各項議題研討,除由世界銀行代表闡述該組織多年來對國庫系統發展之投入及研究成果外,我國並積極參與本次研討,主動擔任「現金管理」演講人,分享我國發展經驗及現行作法;另外主辦國俄羅斯,與新加坡、泰國、中國大陸、韓國、越南、印尼等均分別提出相關報告,就各經濟體之經驗及成果充分交流。

#### 貳、會議地點簡介

喀山(Kazan)係俄羅斯韃靼斯坦共和國的首都及最大城市,自 1990 年代初蘇聯解體後,喀山重新成為了韃靼文化的中心。為俄國第八大城市,城市人口幾乎全部由俄羅斯人(48.8%)和韃靼人(47.5%)組成,為俄羅斯城市人口排名第六。

喀山位於俄羅斯歐洲部分,伏爾加河與卡贊卡河的交匯處。與莫斯科、聖彼得堡同為俄羅斯的三座A級歷史文化城市,喀山克里姆林宮為世界遺產。自 21 世紀起,喀山開始重新進行大幅整修,包括喀山克里姆林宮在內的歷史中心均經重修。喀山在 2005 年慶祝建城千禧年,因喀山歷史委員會官方認定 1005 年為喀山城市建立年。俄羅斯最大的清真寺,係位於喀山克里姆林宮內耗資超過一億美元的庫爾·沙里夫清真寺;喀山聖母像亦被重請回城,千禧橋 2005 年落成,地鐵線路也在同年開通。喀山獲得了2013 年大學生運動會和2018 年世界盃足球賽的舉辦權。

#### 參、會議過程

- 一、國庫及政府財務管理資訊系統發展趨勢
- (一) 世界銀行推動建立財務管理資訊系統:

世界銀行為協助開發中國家建置國庫資訊體系,並建立財務管理資訊系統(Financial Management Information System, FMIS)架構之全球性經驗,自 1984年至 2012年間在 54 個國家推動 93 項計畫,計畫總成本為 36 億美元,其中世界銀行資助金額達 24 億美元。截至 2012年1月底止,上開計畫中已結案數達60項。研究結果摘述如下:

#### 1.FMIS 定義:

所謂 FMIS 的廣義定義為政府財務及預算管理之一套自動化作業程序,透過協助支用需求優先配置、執行及追蹤報告,以及收入妥善管理及記錄等,使政府能有效辦理預算規劃、執行及考核等作業,以利政府施政效能提升。

現代化 FMIS 架構,須符合本國及國際間一致性 認可之財政管理規則及報告標準,並透過集中式的網 站處理架構,使預算執行單位能以統一作業模式辦理 相關作業,以強化政府會計責任,並提升政府財務資 訊可預測性及透明度。

#### FMIS 之完整架構如下:

#### 發展FMIS之完整架構 FMIS: F財務管理 = 政策制定及審查 預算制訂 B預算 + T國庫 (+ O其他) 共投資 審計及評估 預算授權管理 核心國庫系統 Т (預算執行) 財務報告& 資金承諾 預算審查 0 FMIS DB 總帳及會計作業 採購 發布/監督 稅課收入 收支管理 債務管理 資產/庫存管理 現金管理 薪資計算 人力資源管理

#### 2.建置 FMIS 之先決條件:

總結多年來各國推動發展 FMIS 計畫之經驗,成功建置 FMIS 之關鍵因素在於充分縝密的規劃,審慎考量及安排各項步驟之優先順序,其發展須符合個別經濟體之需求建置,在結合資訊系統建置前,即先確認相關先決條件已妥適達成,以減少建置期間發生成本超支、延期及無法達成預期目標之風險,所謂先決條件包括職權及功能之妥適規劃及配置、技術環境的成熟及人力資源之整合,先決條件條列如下:

#### (1)職能方面:

甲、發展一致性的會計流程及預算項目分類

乙、採行國庫單一帳戶

丙、開發政府承諾事項控管及監理機制

丁、強化現金管理功能

#### (2)技術方面:

甲、建置安全的全國通訊網路

乙、建置系統/數據資料中心之籌劃

(3)人力資源:建置資訊通訊技術核心團隊

#### 3.FMIS 運用趨勢:

由於 FMIS 係一套強大完整之整體財務資訊系統,透過 FMIS 建置,有效整合政府財政資訊,其運用範圍廣泛,包括:

#### (1)運用 FMIS 整合政府財務資料:

運用 FMIS 之資訊系統,結合政府財務之各項資料以作為公共支出之分析等作業之需要。進一步之FMIS 發展規劃,將運用財政管理作業系統以整合強大的資料庫,發展多元化分析功能,俾利作為預測、規劃、績效評核及支援決策等需要。為達成整合政府財務資訊之目標,其首要條件係政府各預算單位均需採用一致性的預算及會計分類和作業流程。

#### (2)有效運用資通技術

為有效增進 FMIS 之可信度、效益性及資訊品質,在 FMIS 架構中,可加強運用相關之資通技術 (Information and Communication Technology, ICT) 功能,包括電子支付系統、數位簽核作業、透過網站

定期公布預算執行情形及達成績效等。

#### (3)支援預算支用機關之作業

透過 FMIS 集中式網站之架構,支援各預算支用機關執行相關財務管理功能,包括預算籌編、執行、會計及報表作業、政府財產管理、人力資源及薪資作業、採購作業、績效考核及其他特定功能,以精進現行之人工作業、並改善各機關自行開發獨立作業系統之現況,以利透過共同之系統架構整合財務資訊。

#### (4)提升財政透明度

運用 FMIS 整合政府財務資料,自動產製並透過網站公開相關財政狀況,以增進各界對公共事務之參與、提高財政透明度及政府會計責任。目前世界銀行資助發展庫政系統及 FMIS 的 54 個國家中,已有 42 個國家透過 FMIS 整合資料,定期於網站發布預算執行成果。

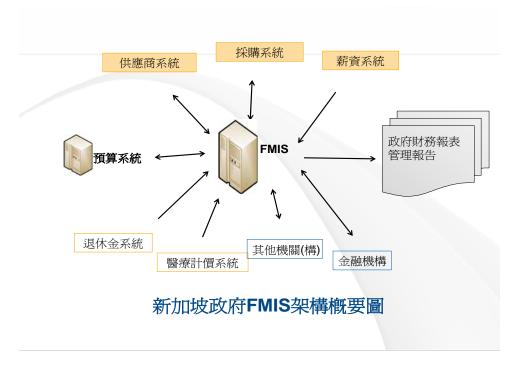
#### 4.發展 FMIS 經驗之結論:

- (1)為建置 FMIS 之功能完備,需透過持續發展及先進 技術之運用,與時俱進以因應財務管理之需求。發 展過程中,有效的授權領導,協調合作和創新是重 要的要素。
- (2)在 FMIS 初期規劃階段,確認系統需求、解決方案 及關鍵設計參數等,對於後續系統建置之順利與否 至關重要。
- (3)在發展系統平台架構時,運用開放資源軟體及創新

方案,以符合 FMIS 之核心需求及合理成本已漸成趨勢。

- (4)發展研定網路公開財務訊息之標準及格式,有效增 進財政管理之會計責任與透明度。
- (二) 新加坡政府管理資訊系統之發展

新加坡政府之 FMIS 係結合主要之 FMIS,與其他 政府系統及金融機構等整合構成。



在 FMIS 架構中,係包含總帳系統、現金管理、 收支管理、資產管理、供應商及付款作業,與報表作 業等。

- 1.新加坡整合性 FMIS 系統發展之關鍵設計理念為:
  - (1)電腦化流程,以提升效能並降低人力需求。
  - (2)集中化,以強化監控及作業效率。
  - (3)強化控制,以確保紀錄完整及減少錯誤。
  - (4)提供有效與即時之資訊,以利制定管理決策。

#### 2.新加坡政府 FMIS 之發展及架構:

新加坡政府之 FMIS 發展與 E-政府發展相輔相成,由電子化支付作業開始,自 2000 年開始發展電子採購作業、2004 年至 2005 年陸續推動供應商自動匯款通知系統及電子化驗證銀行交易作業、2008 年使用電子發票。其所發展之 E-政府之涵蓋範圍包括G-B(政府-企業),G-C(政府-民眾),G-E(政府-受雇者),G-G(機關-機關),其架構如下:



新加坡 E-政府架構說明:

#### (1)G-B(政府-企業)之作業架構:

透過全程電子化作業,採用政府供應商資訊網、一站式採購網站、電子支付及電子發票等,有效提高作業效能及達到監控目的。政府採購作業透過政府供應商資訊網及採用電子支付作業,可線

上登錄交易資訊、即時更新紀錄及開立電子發票、減少支票使用、加速付款,並可線上追蹤付款進度等,降低人為計算錯誤及漏開發票之風險、節省作業成本及縮短交易流程,並加強交易控管,進而提升供應商建置電子化作業之意願。由於政府主要業務均採電子化作業,有效強化預算控管機制,並可依需求即時產製正確及可信之資訊,以作為制定決策之依據。

#### (2)G-C(政府-民眾)之作業架構:

- 甲、民眾不論是稅款或規費之繳納,與政府辦理 社會津貼、補助之撥款等收支作業,均透過 電子化程序完成,可提高作業效率、降低政 府代收付作業成本,並達到便民等目的。
- 乙、在 FMIS 下之政府薪資系統,透過個別安全模 組建立個人薪資及績效檔案管理,並運用系 統以電子化程序,辦理薪資、津貼、代扣稅 額及退休金等之計算及撥付,發送電子郵件 通知受僱人員薪津明細,所有作業以無紙化 作業在線上完成,有效提升作業效能。

#### (3)G-G(機關-機關)之作業架構:

- 甲、新加坡政府在政府資金管理方面,係採行集 中收支庫款管理,以強化收支作業之時效、 提高資金運用效能。
- 乙、在預算控制方面,新加坡政府運用 FMIS 建立

法定預算檔案,各部會於預算支用時,透過 FMIS系統監控,須在預算額度內辦理,並運 用系統彙整收支資訊,每月傳送執行狀況供 預算管理單位考核追蹤預算執行績效。

丙、在 FMIS 之資訊運用方面,充分運用系統資訊 線上、即時及電子化之特性,建置有效即時 之資訊功能,包括現金面及應計制之會計資 訊、各項財務面之資訊需求(如總帳、應收、 應付等資訊)、每日產製即時、可信之報表, 並於定型化報表外,可彈性依需求目的增添 報表格式,以強化系統資訊之決策功能。

#### 3.新加坡政府 FMIS 之效益及未來規劃:.

新加坡政府透過建置 FMIS,對於政府財務管理 具有極大助益,包括:1.運用電子化作業整合作業流 程以強化管理、2.提升各項財務作業之效能、3.便於 各項財務管理報表之編製,以強化資訊運用價值、4. 提高政府對於財務狀況之監督等。

未來,新加坡政府面臨整體國際情勢急遽變遷, 將需要運用更多可靠資訊,以作為有效管控及決策之 依據,因此如何積極運用 FMIS 之資訊創造附加價 值,如分析資料以預測未來趨勢,制定決策以因應趨 勢變動、辨認風險以強化管理,與提升政府整體效能 等,將是未來努力之目標。 (三) 泰國政府財政管理資訊系統(Government Financial Management Information System, GFMIS)

泰國政府於 2002 年~2004 年間,為推動行政革新計畫,配合發展 GFMIS,主要目標包括提高決策透明度、財政管理現代化、運用資訊科技以提升公共行政。該系統於 2003 年 7 月起開始規劃開發,並於 2004年 10 月正式實施。整體架構涵蓋範圍包括中央及省財務管理系統,係採全國性系統,即時線上作業、單一帳戶及定型化報表。

GFMIS係以泰國財政部為專責機關,並依其業務分工,分別由主計單位負責系統功能作業及每日運作;常務次長辦公室(ICT Center)負責電子及網路系統之規劃及維護。GFMIS整體架構計5大項目,由預算控管系統為起始,包含採購系統、財務及會計系統、成本系統、人力資源管理系統,並開發子系統電子化,如採購、薪資、退休金及醫療等各項作業以為支援,另財務及會計系統部分包括應收及應付作業、現金管理、固定資產管理及總帳作業等。

GFMIS 目前已達成熟穩定狀態,全部政府機關均已納入系統運作,由於系統係每日即時線上作業,使各項作業更為簡化、即時,有效縮減工作流程及資料處理時間及節省人力、用紙及時間等成本,並透過系統檢核以提高交易正確性,例如機關支用作業之平均工作日數,由過去之3日縮減為2日、報表產出自動

化,加速資料查詢速度及財務報告整合產出,使報表 產出更為迅速及完整等。另由於提升報表即時性及整 合功能,使 GFMIS 有效成為決策工具,用於政策規 劃及制定、追蹤及評估各機關財務管理成效,與提高 預算執行效率等。

#### 二、財務管理資訊系統之發展

#### (一)中國大陸庫政系統發展:

1.中國大陸庫政系統發展現況:

中國大陸之政府財務管理資訊系統(Government Financial Management Information System, GFMIS),係自 2000 年起開始規劃,並於 2001 年開始建置國庫管理資訊系統(Treasury Management Information System, TMIS),同時間庫政體制採行國庫單一帳戶系統,實施集中收支作業,並透過大規模電子網路,完成電子化作業之建置,包括及TMIS,其功能及架構如下:

#### (1)即時預算執行監控機制:

- 甲、產製各預算層級之整合性國庫及預算執行報表,與相關分析性資訊。
- 乙、帳務結算系統,其範圍包括總體財政結算及 部會別帳目結算、中央政府及地方政府財政 結算等。
- 丙、結算統計系統,彙集歷史財政統計資訊以定期透過財政部網站發布財政統計狀況及變動分析。
- (2)TMIS 計涵蓋 9 項子系統,分別為授權系統、支付 系統、政府採購系統、薪資系統、收入系統、債務 系統、現金管理系統、帳務系統及財政統計分析系 統等。

就債務管理方面,中國大陸自 2006 年建立債務 餘額管理系統,並自 2008 年下半年起積極性財政政 策,目前計已發行5兆人民幣債券;政府債券種類包 括儲蓄債券及登記形式(book entry)債券,到期日自 3 個月到 50 年間不等。

#### 2.中國大陸 GFMIS 之未來改革規劃

為使系統發揮最佳效能,中國大陸對於系統運作 功能訂定精進目標如下:

- (1)即時預算執行監控機制
  - 甲、強化國庫單一帳戶之效能。
  - 乙、加強預算執行報告之深度及廣度。
  - 丙、持續精進即時預算執行監控系統及結算與財 政統計系統。
- (2)國庫現金管理及 TMIS
  - 甲、研擬建置國庫現金帳戶及法規以利目標管理。
  - 乙、建立標準化作業機制,並增進運作範圍及效率。
  - 丙、增進國庫融資及投資工具多元化及管理系統。
  - 丁、逐步推動地方政府現金管理。
  - 戊、提升 TMIS 的支付管理架構。
  - 己、強化財政資訊彙集及分析機制。
  - 庚、提高國庫管理之自動化。
- (3)債務管理:持續推動債務管理創新措施及強化債 券市場運作機制。

#### (二)韓國發展數位預算會計系統成果:

1.韓國政府數位預算會計系統(dBrain system)之介紹

韓國政府數位預算會計系統(dBrain system)係為整合型作業系統,適用對象係涵蓋中央各部會、所屬機關及各地區辦事處,運作範圍係將各項政務運作之相關功能予以納入,包括計畫管理、預算編製及執行、資產管理、會計及結算等,並可與其他功能作業系統結合,整合國庫管理、餘裕資金管理、債務作業、收支作業、國有財產、會計及結算作業、採購作業、電子支付及授權作業、政府財政統計及分析等。

#### 2. 韓國政府 dBrain system 之功能

系統建置係以方案型預算系統為管理架構,各項 財政方案於存續期間內之推動過程均透過本系統運 作及管控,自方案開始之登錄、工作項目、預算配置、 支用、方案相關資產及負債之管理,及至結案之所有 程序,均可在本系統內執行,並透過系統達到監控目 的。其管理架構以政事別及計畫項目作為依據,涵蓋 範圍包括 16 項主要政務別及 69 政事部門別,計畫項 目之分類係以政策編制之財務責任為原則,採行績效 管理及由上而下之財源配置,計有 744 方案、3,088 活動項目及 8,784 計畫。

系統主要功能包括:

(1)預算管理:建立中程財政計畫及歲出架構,據以 編製年度預算,並辦理預算分配及執行。

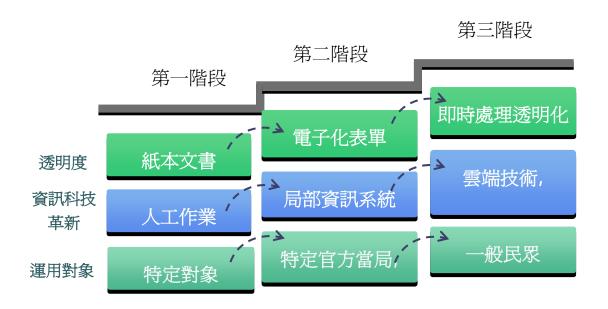
- (2)收入管理:收入機關開立收入通知書通知繳款人繳納,並將收入彙整資料傳送 dBrain system 建檔,繳款人得透過網路銀行或臨櫃繳款,金融機構收款後將收入資料彙集傳送 dBrain system 記錄,所收款項並每日解繳韓國銀行。
- (3)支付作業:受款人透過網路提出支付需求,由政府財務單位核准相關款項後,支付單位通知韓國銀行同意付款,將資金撥入受款人帳戶,韓國銀行同時將交易結果傳送 dBrain system 紀錄。

#### (4)會計及結算作業:

- 甲、帳務自動化:依據系統彙集之交易紀錄自動 記帳。
- 乙、即時記帳:包括日記帳、總帳、明細帳、收 支帳及試算報表等。
- 丙、雙軌結算:包括整體財務狀況結算及個別方 案執行結算。
- (5)績效管理:透過系統建置各方案及計畫項目之預 期效益及訂定績效指標,由各主辦單位填報執行進 度,並自我評估執行成效,以深化績效管理,落實 方案執行及達成目標。
- (6)統計分析:運用 dBrain system 之各項中央財政資 訊系統,整合或以人工設定需求,以產製各項財務 統計資訊。

#### (三)俄羅斯政府管理資訊系統現況:

俄羅斯政府財務資訊管理系統(FMIS)係包含在 所規劃之電子化聯邦資訊系統(E-State)內,所謂 E-State 之架構包括公共健康(E-public health)、公眾服 務(E-public services)、教育(E-education)等,其目的在 於增加施政透明度及參與度,以強化施政責任及政務 效率。在財務管理之資訊改革過程中,分為三階段推 動,在透明度、資訊科技及運用對象等方面加以提升。



#### 1.俄羅斯 FMIS 之架構:

俄羅斯 FMIS 之架構包含 11 大類別,分別為預算 籌編、會計及帳務作業、收入控制、支出控制、採購 管理、非金融資產管理、貨幣資產管理、人力資源管 理、債務及貨幣資產管理、績效分析及財務控制等, 其發展規劃包括四大重點,分別為:

(1)透過線上作業及電子化資料處理,以達資訊無實

體化及功能分類之一致性運用。

- (2)資料單次輸入,透過系統整合資訊。
- (3)採行標準化作業流程。
- (4)確保全天候 24 小時資料庫存取運用。

#### 2.俄羅斯 FMIS 之優勢:

透過上開發展規劃,FMIS 在運作效率可達以下優勢,包括:

- (1)節省作業時間:透過自動化產製會計管理資料, 提高資料分類及搜尋等處理效率,減少報表產製時間,並可整合歷史資料加以運用。
- (2)提升資訊品質:簡化作業流程,透過資料單次輸入,以減少多次紀錄之錯誤發生率,並可達到資訊即時記載及可溯性,提高資訊流通安全性。
- (3)創造財務利益:減少紙張、人力、印刷、裝訂及 儲存成本。
- (4)作業程序統一及自動化:可依需求設定自動控管機制、統一數據交換格式,並減少支付作業時間。 3.俄羅斯 FMIS 之推動規劃及預計成效:

俄羅斯政府業就 FMIS 發展訂定年度執行計畫, 計畫期間自 2012 年至 2015 年,各年之年度目標如下:

- (1)2012 年:完成登錄及功能分類之一致性運用,與 初期子系統建置規劃之確認。
- (2)2013年:建置預算系統之單一入口網站。
- (3)2014年:將簿記之帳務作業建置於 FMIS。

- (4)2015 年:俄羅斯聯邦政府作業將整合包融於系統 運作;運作範圍將涵蓋各聯邦行政區及地方行政機 關。
- 4. 俄羅斯政府發展 FMIS 之預計量化成效:

俄羅斯政府對於發展 FMIS 預計達成成效以量化標準作為推動目標,包括:

- (1)政府財政資訊透明度指標提高超過70點。
- (2)提高聯邦公務部門內電子化文件分享比例 70%。
- (3)減少聯邦公務部門內財務及管理文件處理時間 30%。
- (4)降低聯邦公務部門內財務及管理報表產製時間1.5 倍。
- (5)建立 100%即時資訊分享之俄羅斯聯邦預算系統網。
- (6)落實 FMIS 系統適用範圍包括俄羅斯聯邦政府之 全部項目及半數以上之聯邦自治區。

#### 三、現金管理:

(一) 世界銀行代表對於現金管理之研究

世界銀行代表 Mr. Ian Stokey (公共財務管理專家)發言如下:

#### 1. 現金管理的目標:

現金管理之首要目標,係在確保現金足供支應所 有支付承諾,並在符合首要目標之前提下,致力以下 目標之達成:

- (1)節約政府內的現金:兼顧節省資金成本及降低風 險,維持最低融資金額,必要時再舉借。
- (2)有效控管政府的總短期現金流量:妥適規劃現金 餘絀之因應措施,並力求餘裕資金收益最大化。
- (3)其他有益的配套:兼顧債務管理、貨幣政策及健全貨幣市場(市場流動性及基礎設施等)。

#### 2. 現金管理之定義:

在政府內及政府與其他部門間之短期現金流量 與餘額之管理,能以最具成本效益之方式訂定策略及 相關措施,俾利在"正確"時點用於"正確"地方之 情形下,國庫有"正確"之現金。現金管理措施可分 別就傳統(消極)措施及現代化(積極)措施析述如下:

#### (1)傳統(消極)現金管理措施:

甲、消極因應現金餘額變動。

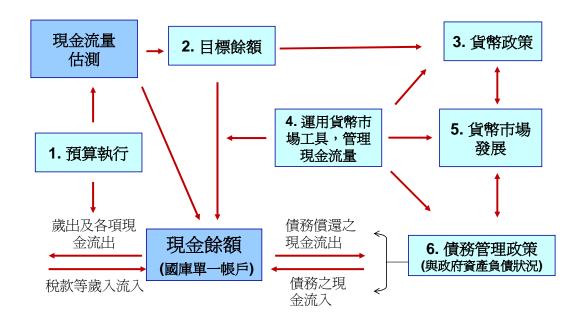
乙、控管現金餘額,維持現金備付餘額,以因應 現金流量之波動及意外之現金需求。

- 丙、必要時採行限額/減緩支付或延後付款,惟現 金限額控制非屬現金管理。
- (2)現代化(積極)現金管理措施:
  - 甲、積極因應現金餘額變動。
  - 乙、積極運用貨幣市場之融資及償還措施,以求現金流量之平滑化。
  - 丙、運用相關政策措施,以降低備付現金額度。
  - 丁、根據現金流量之波動情形,規劃相關措施以 確保支出計畫執行。

經濟合作發展組織(Organization for Economic Co-operation and Development, OECD)中之中型所得國家(尤以歐洲),與APEC之部分國家正逐步採行積極現金管理措施。

- 3. 國庫現金管理對於公共政策之兩大關鍵目標
  - (1)財政性:確保政府有效管理現金結餘,無餘裕現 金留存。
  - (2)貨幣性:減緩政府資金流動對國內金融機構之衝擊,應確保避免政府大額及不可預期之現金變動對金融體系流動性之影響,與維持貨幣政策之穩定性。

## 現金管理及相關政策之交互影響



4. 公共財務管理中關於政府現金管理之核心

政府為有效現金管理,所採行財務革新措施之核 心要素如下:

- (1)有效率的預算及會計系統(即 FMIS)。
- (2)為達正確及時管理,可運用具健全政策及程序之中程財政及支出架構,其包括監控政府支出,與預 測政府收入。
- (3)國庫單一帳戶。
- 5. 現金管理與預算控管之關係:

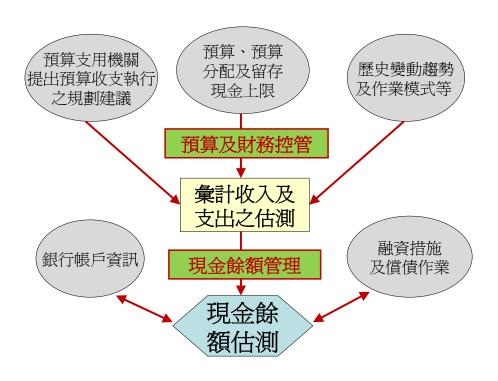
基於上開說明,現金管理與預算控管相輔相成, 並可達成現金餘額估測之目標,爰說明其意義如下: (1)預算財務控管:

- 甲、收入及支出預算編製及執行。
- 乙、控制預算撥款及核准授權。
- 丙、對於收支執行之主計權責及財務控制。
- 丁、政府會計作業之規範。
- 戊、財務報表編製及揭露。

#### (2)現金額度管理:

- 甲、現金流量之估測。
- 乙、銀行帳戶及往來關係之維持。
- 丙、即時並有效率辦理收支作業。
- 丁、管理政府營運資金及浮動現金餘額。
- 戊、交易及利息成本最小化。

下表簡要說明透過預算財務控管及現金額度管理,雙管齊下以達成現金餘額估測之關聯:



#### 6. 國庫資金之有效規劃及運用

經由充分運用預算收支執行計畫、歷史變動趨勢 及債務作業規劃等相關資訊後,所完成之現金餘額估 測非為現金管理之終點,如何運用現金餘額估測,以 維護國庫支付安全,並使政府資金運用效益最大化, 方為現金管理之努力目標。因此,將國庫資金適量分 層配置及訂定合理之現金餘額目標,據以研擬運用策 略,積極執行相關措施,將可提升整體國庫資金之運 用效能。

#### (1)國庫資金適量分層配置:

對於國庫資金,依據其留存目的之不同流動 性需要,可區分為營運資金、備付現金及閒置資 金。

### 甲、營運資金(Operation Cash Balance):

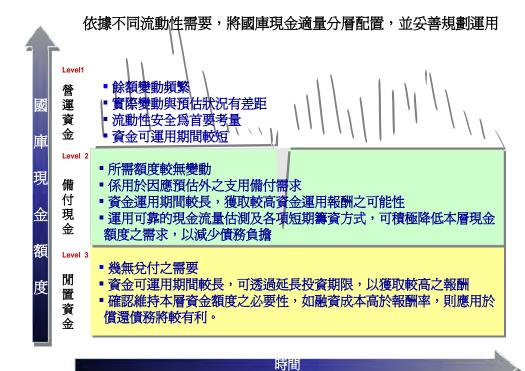
係為支應目的之現金需要,現金流動為主要考量,餘額變動頻繁,若投資僅限隔夜。

#### 乙、備付現金(Reserve Cash Balance):

主要係為支應估計外之現金需求所留存,現金 餘額很少變動,資金可運用辦理較高收益之投 資(隔夜或月),以及減少或刪減債務額度。

丙、準常置資金(Semi-Permanent Cash Balance)

資金不流動,資金穩定性最高,可從事較積極 之運用規劃,例如以長天期之規劃,以獲取較 高之資金報酬,或減少債務。



#### (2)訂定現金餘額目標:

經由對國庫現金餘額適當分析歸類後,可再 進一步依據歷史經驗、預算規模或資金動之流程 等實際需求,推估國庫現金最適餘額,據以訂定 合理現金餘額目標,以作為現金管理之各項決策 及規劃依據。

對於訂定現金餘額目標之作法,經參考國際經濟合作組織會議 (Organization for Economic Cooperation and Development, OECD)22 個會員國中,計有 16 個會員國訂有現金餘額目標,其目標型態有最低餘額、最高上限及依據特定目的或動機而訂定。就目標餘額設定之考量,應涵蓋下列

各項因素以求周延:

甲、財政狀況及其長期趨勢

乙、現金主要來源(如融資支應)

丙、現金流量預測之準確性

丁、取得短期資金之難易程度

戊、各項資金成本效益之評估(包含融資成本及運 用報酬等)

己、風險承受度等

#### 7.各國情形概述:

為強化對於現金管理之瞭解,就亞太經濟合作區 域內各經濟體之管理狀況加以分析,區分為先進管理 及落後管理,並分析其特點如下:

#### (1)較先進之管理特徵:

包括澳洲、加拿大、日本、紐西蘭、新加坡及美國係屬最佳典範,其所具備之架構及管理特點如下:

- ①對於政府整體現金額度採行集中管理及國庫單一帳戶。
- ②對於整體現金規劃架構之涵蓋範圍具備明確認知 及瞭解。
- ③具備準確預測短期現金流入和流出之能力。
- ④建置適當的交易處理及會計作業架構。
- ⑤具備資訊即時共享機制,以掌握國庫及其分支機 構、收支機關等各項變動訊息。
- ⑥適當的權責分工。

- ⑦運用現代化銀行及支付結算系統。
- ⑧運用各項金融市場短期工具以靈活現金管理。
- ⑨整合債務和現金管理。

#### (2)較落後之管理特徵:

包括中國大陸、印尼、墨西哥、祕魯、菲律賓及 越南之現金管理仍具有待改進之空間,其所具備之架 構及管理特點如下:

- ①銀行體系為低度開發或低度利用。
- ②以支票或銀行本票作為支付工具。
- ③開立許多政府銀行帳戶。
- ④無法得知所有個別政府銀行帳戶之每日總結存。
- ⑤發生非必要之融資。
- ⑥未辦理現金流量預測作業。
- ⑦現金管理主要用於支出控管。
- ⑧採行延後支付之措施。
- ⑨資訊科技系統係低度開發。
- ⑩對於認知現代化現金管理技能及現金規劃重要性之人才匱乏。
- ① 現金運用之收益工具僅限於銀行存款。
- (2)中央銀行所提供之服務成本不透明或不合理。
- ③政府資金流動性(或投資決策)等之管理單位為中央銀行而非財政部。
- (4)政府資金無息存放於中央銀行。

#### (二) 中華台北現金管理之分享

1.我國財政狀況及趨勢變動說明:

我國財政收入主要來源為稅課收入,約占歲入總額 70%以上,惟政府支出法定義務支出逐年增加(亦約7成以上),致整體財政結構僵化。2008年因金融風暴衝擊,致 2009年度經濟成長大幅衰退,導致稅收大幅短收,嗣經採取財政擴張措施,促使經濟快速復甦,財政赤字並已逐步縮減。

由於我國係外銷導向國家,與國際經濟情勢變動 息息相關,面對外在變動日趨劇烈,我國經濟及政府 歲入亦深受影響,為避免政府歲入受到衝擊,而影響 政務運作,我國除推動各項健全財政措施外,並積極 強化政府現金管理,增加政府收支調度之彈性與效 率,以順利各項政策推動及政務運作。

- 2.我國現金管理之運作方式:
- (1)我國現金管理之目標

主要目標:

甲、確保足額資金備付到期支出需求,維持支付安全。

乙、力求餘裕資金最小化,降低資金成本。

#### 次要目標:

甲、配合債務管理:依據國庫資金需求,協助公債 及國庫券定期適量發行。

乙、配合貨幣政策。

#### (2)我國現金管理之架構:

我國現金管理係由財政部國庫署為辦理機關,國 庫存款以單一帳戶設置於中央銀行,其業務範圍如 下:。

#### 財政部國庫署:

- 甲、國庫管理:國庫制度規劃、國庫業務督導、國庫存款管理、國庫收支預估、公共債務管理、國庫資訊系統管理。
- 乙、支付業務:運用集中連線資訊系統辦理預算控制及審核庫款撥用;依據機關開立之付款憑單辦理付款作業。
- 中央銀行:管理國庫單一帳戶,並委託其他機融機構 辦理國庫收支作業;辦理公債及國庫券發 行、登錄、買回、付息等業務。

#### (3)現金管理的作為:

為達到維持支付安全及降低資金成本之目標,我國之現金管理係透過收支管理、現金流量預測及彈性 運用融資工具等方式加以落實。

#### 甲、收支管理:

依據行政院主計處核定之分配預算,歲入實現 數即時解庫,增加庫款運用額度;歲出部分以 分配預算數為限以利預算控管及避免超支,並 運用大額支出提前通報機制,以利資金籌措規 劃降低支付風險。

#### 乙、現金流量預測:

參採現金流量歷史資訊、考量本年度預算及分配情形、到期債務等,並依據總體經濟預測及 政經因素變動等、辦理現金收入、支出及餘額 之每日、每月、每週及每季估測作業,並隨時 依據最新狀況即時更新估測資料,期能以精確 與即時之現金流量估測,有效減少現金無預期 之波動,降低現金管理風險。

#### 丙、彈性運用融資工具:

運用精確及即時現金流量預測,降低非必要之融資金額及縮短融資期間,且透過餘額預測,將預期產生之餘裕資金,辦理債務提前償還,包括償還借款或提前買回公債及國庫券等,均有效減少政府財務負擔。

#### (4)現金管理的成效:

運用妥適現金管理,達成支應政府支用需求,以 順利各項政策推動及政務運作之基本目的外,並達成 以下成效:

#### 甲、提升財務效能:

由於近年來我國財政呈現短絀,政府財源有賴 債務支援,因此透過現金管理,妥善運用融資 工具及增加融資彈性,可有效降低資金成本, 100年度業分2次買回國庫券170億元,減少債 息4.33億元,提升政府整體財務效能。

#### 乙、配合健全債務管理:

配合公債及國庫券定期適量發行規劃,有效建構公債及國庫券殖利率曲線,透過可預測及透明度之發行規劃,降低市場預期,有利投資人提前規劃資金配置,增進市場穩健及提高市場效率。

#### 丙、配合貨幣政策:

透過國庫券定期適量發行建立殖利率曲線,提供中央銀行作為短期利率基準;提供國庫收支預估資訊,以利中央銀行掌握大額資金變動,俾利各項貨幣政策之規劃。

- 四、政府財務管理資訊系統在東亞經濟體之發展現況 (一)越南庫政及預算管理資訊系統之發展
  - 1.越南政府係由財政部國庫局(Vietnam State Treasury, VST)擔任庫政管理機關,其涵蓋業務如下:
  - (1)管理政府預算及會計制度,國庫資金和其他資產。
  - (2)主管政府庫政事務,統一集中現金管理及支付作業。
  - (3)集中統一的現金管理和支付。
  - (4)發行公債籌措資金以利預算執行及開發投資之需。
  - (5)推動現代化庫政作業。
  - 2. 國庫及預算管理資訊系統(Treasury and Budget Management Information System, TABMIS)之簡介:

自 2006 年起,越南推動財政管理革新方案(Public Financial Management Reform Project, PFMRP),由越南國庫局負責 TABMIS 之發展及運作,與配合開發相關之會計作業,TABMIS 係財政管理革新方案中規模最大且耗時最長之項目,其設計係依據世界銀行及國際貨幣基金之國庫關聯模型(Treasury Reference Model, TRM),採用集中架構,其達成目標為:

- (1)政府預算管理現代化,以強化規劃、執行、報表編制 及會計責任。
- (2)提升財政管理透明度。
- (3)確保政府財務安全。

TABMIS 透過網路,於國庫系統及各預算執行部 會之財務單位間建立連線作業,目前已完成 1,500 個 以上布點建置,並透過介面與舊有系統連結,其連結項目包括國庫會計系統、租稅徵收管理系統、債務管理系統、銀行支付系統等,以利 TABMIS 能運用擷取歷史資訊,完整呈現長期財政及預算執行等變動趨勢。本系統方案自 2006 年推動起,業完成建置規劃階段,並自 2009 年中旬,開始試行整合階段,包括試點作業及資訊轉出等,預估在 2012 年底完成階段目標。

#### 3.TABMIS 之推動規劃:

- (1)採用範圍:於系統內採線上作業,涵蓋政府預算收支機關及所屬分支機構,與國庫之代庫金融機構等。
- (2)其功能計六大模組,分別為預算分配、應收帳款、應 付帳款、訂單採購及承諾、現金管理,與總帳及報表 等。
  - (3)推動方式:先由中等規模之省開始試點施行;儘量一致化各試點單位之需求功能以降低系統差異化,建置服務平台以提供試點單位直接支援及協助解決系統運作問題。

#### (4)推動之成功要素:

- 甲、取得政府管理高層之支持及承諾,以利跨部會 及系統長期建置作業及推動運行。
- 乙、發展及實施標準化流程,以提供使用者一致化 之作業,與提升業務效率。

丙、設置專業團隊,有效傳達及落實方案目標。

- 丁、將系統委外資訊開發廠商之相關智能,有效移轉至政府專業核心團隊,以利後續運作維護。
- 戊、透過後續系統更新維護及解決方案之採行,以 利使用者參與及相關訓練。

#### (5)推動成效:

甲、截至 2011 年底, TABMIS 已完成 46 個省/市試 點運作,並同步完成兩個中央部會之預算集中 撥付。

乙、已開發 40 個報告格式,並提升系統管理功能。 丙、完成數個系統功能開發,以配合政府管理需要。 4.TABMIS 之未來展望:

TABMIS 自 2006 年開始規劃,預計至 2020 年前 將達成下列目標:

- (1)建置安全、有效率的電子化庫政系統,並透過現代 化 IT 平台上完成國庫現金收支等財務作業。
- (2)透過預算會計改革,改進財務資訊管理系統,整合 財務報告,預算分配,執行,會計及決算等預算執 行之現金管理功能。
- (3)運用國庫集中帳戶統籌國家財政資金的收入和支 出,採集中支付,以集中管理國庫資金,並在風險 管理的原則下,建立有效的付款控制流程。
- (4)運用現代化庫款支付平台,結合金融機構建立電子 支付結算作業,加快支付作業處理速度。
- (5)以權責發生制為基礎,公開和透明的公共財政管理

之原則要求,發展現代化政府會計制度,以符合國際會計標準。

- (6)健全資金市場發展,以兼顧政府現金管理、債務管理之需要。
- (二)印尼財務管理資訊系統(SPAN)之發展
  - 1. SPAN 之背景說明:

印尼政府在世界銀行之資金支援下,自 2004 年 12 月開始 SPAN 之開發建置,依規劃期程預估於 2014 年開發完成。SPAN 之策略目標,包括:(1)協助制定預算的政策方向、(2)提升預算執行單位之會計責任、(3)提高國庫服務效率、(4)提升現金管理效能、(5)確保財務資料的安全和可信度等目標。

SPAN 之涵蓋功能包括預算作業、預算授權管理、承諾管理、收支管理、現金管理、報表編製等,所包含作業系統包括各部會運作之會計系統、採購訂單及承諾作業、資產管理系統及收支資料庫管理等,與財政部運用之債務管理、投資管理及收入管理等。

#### 2. SPAN 之改革措施:

為利 SPAN 建置計畫能順利推動,印尼政府就現有之政策、作業程序及系統架構等,均重行檢討其功能、範圍及目的後,規劃各項改革措施,包括:

- (1)政策改革方面:包括政府相關法規、會計架構及權 責會計制度之採行。
- (2)作業程序改革:運用資訊技術全面改進交易流程,

以使預算及國庫交易資訊一致化。

(3)資訊系統改革:包括標準化及整合性資訊架構、建 置資訊管理機制。

#### 3. SPAN 之未來推動方向:

印尼政府在檢討現有制度及作業流程後,以制定 SPAN之架構及未來持續推動之方向,摘述如下:

#### (1)現行狀況:

現行印尼政府所採用之財務管理系統係採用 統一發展及管理之獨立電腦系統,計有 17 套系統, 包括 14 套主計預算及庫政系統,與 13 套由預算機 關採用之作業系統。

#### (2)SPAN 規劃架構:

各項財務管理系統將以核心會計 (Core Accounting)為基礎,整合各項預算及國庫作業之交易程序,並據以產製資訊回饋機制。其規劃將以SPAN之系統建置功能取代 14 套作業系統,原7套系統整合 SPAN內,並強化作業程序之自動化。

#### (3)SPAN 未來推動目標

未來 SPAN 之將強化系統之整合功能及自動化程序,以提升績效預算、中程支出架構及財務報表編製等作業之效能。

#### 4.印尼政府推動 SPAN 之心得分享

印尼政府所推動之財務資訊管理改革方案,透過 各項措施之採行,將相關經驗及心得提出分享:

- (1)財務資訊系統革新,因涉及法規、作業程序、系統 架構及各部會人員參與,需要長期規劃、協調及溝 通過程,以力改革順暢及規劃周延。
- (2)為使改革效率提高,在改革步驟及措施之擬定,須 審慎規劃及妥適安排優先順序。
- (3)妥善規劃改革措施,輔以資訊系統及方案管理適時 採用,可提高改革成功可能性。
- (4)透過財務資訊系統建置,提供持續整合系統資料及 作業程序等。

#### 伍、心得與建議:

經參採世界銀行之研究及各國經驗分享,就我國 之現行體制及作法,提出檢討心得如下:

一、我國現金管理架構係以符合國際間一致性標準為原則獨立建置,並有效運作:

健全的政府現金管理,可透過有效的收支體系,以 最低資金成本,靈活運用政府資金,充分支應政務推 動。我國現金管理架構發展多年,雖從未經由世界銀行 等國際機構取得技術或資金援助,惟我國均參採國際相 關理論及實務經驗,作為體制及作業發展之參考,不論 是庫政體系、資金運用、債務管理等,相較於各國情形, 我國仍具有相當之水準。

依據世界銀行對於政府良好現金管理的標準應具備之九大特點,除具備資訊即時共享機制外,其餘八項我國均已具相當程度,包括:現金額度採行集中管理及國庫單一帳戶、對於整體現金規劃架構之涵蓋範圍具備明確認知及瞭解、具備準確預測短期現金流入和流出之能力、建置適當的交易處理及會計作業架構、適當的權責分工、運用現代化銀行及支付結算系統、運用各項金融市場短期工具以靈活現金管理、整合債務和現金管理等。

由於我國財務管理資訊系統包括預算作業、財政管理及庫政系統,分屬由行政院主計總處、財政部及中央銀行各自依所屬權責及管理需求開發運用,資訊之整合

程度相對較低,部分資訊重複建置,且需運用人工作業 加以彙集分析,因此資訊運用效能尚有提升空間。如能 加強資訊整合及即時共享機制,我國現金管理整體架構 及運作將可完全符合先進管理體系之標準,並充分落實 政府現金管理之運作目標。

# 二、發展健全 FMIS 需有明確目標及作業期程,以利逐步推動及落實執行

健全及完善的 FMIS 係政府財務管理之一系列自動完整解決方案,使政府財務資訊能涵蓋計畫、執行及考核預算等各個階段,並透過系統運用資訊自動整合及回饋機制,有效作為預算籌編之評估、預算執行之監督,與會計作業之執行、決算報表之編製及績效考核之依據等。透過完整財務資訊系統之建置及運用,將有助於各項財政措施之擬定及執行,對於政府財政健全之發展具有極大之效益。

依據本次會議各國提供多年來推動發展 FMIS 計畫 之經驗發現,其發展須有明確的目標及作業期程,且推 動期程均需費時多年,包括:

- (一)初期規劃:依據各國之組織編制及管理需求,擬訂系統整體目標,整合資訊技術及人力資源等相關先決條件,以規劃推動作業期程。
- (二)推動過程:確實依期程達成階段進度,充分提供訓練課程,以協助系統參與、運用人員瞭解系統目標及作業方式,有效落實系統運作,並於各期程推動階段即

時檢討執行成果,以減少建置期間發生成本超支、延 期及無法達成預期目標之風險。

由於FMIS係為整體政府財務資訊整合,其涵蓋面 非僅僅以財務或現金面為限,且政府整體政務推動,係 各機關依權責職掌分工執行,因此完善之FMIS架構非 僅為財政管理部會之職責,係跨部會、跨機關之系統運 作,由各中央部會共同投入及參與,方能使系統功能完 備及運作順利。為利各項財務資訊管理功能得以有效整 合及確實發揮成效,在推動規劃時,透過政府較高層級 之承諾支持,並設定短期、中期及長期之預計目標及達 成效益,定期檢討執行進度與成果,將有助於計畫之落 實執行。

為利我國財務資訊管理運用及現金管理更趨健 全,並符合先進標準,對於我國之現行作法提出建議事 項如下:

#### 一、推動我國的整合性財務管理資訊系統

鑒於整合性財務管理資訊系統可擴大政府財務資 訊運用廣度及深度,有效協助政府合理配置財政資源、 追蹤預算執行進度及落實工作計畫績效考核,對於提高 政府財務資源之管理效益具有極大之助益,因此系統建 置需以政府規模為整體考量,雖需投入龐大成本及人 力,並需有計畫性規劃推動,但各國均積極投入發展, 期能透過財務資訊整合,有效提高政府財務效能,達成 財政管理之健全。 我國現行業建置之各項財務管理資訊系統,分由行政院主計總處、財政部及中央銀行各自就所屬業務開發資訊管理系統,惟整合不足,因此跨部會財務資訊之整合仍有改善之空間。包括:

- (一)行政院主計總處:為預算作業開發之「政府歲計會計 資訊管理系統」,自 93 年迄今,其間不斷改進增修, 目前功能涵蓋自預算籌編、預算控制、普通會計、決 算編製等子系統,作業方式係由各預算執行機關登錄 上網輸入相關作業資訊,系統可自行產製傳票及報表 等,簡化人工作業,其中預算控制部分,系統並彙整 各機關之分配預算,傳輸轉檔供台北區支付處做為控 制各機關預算支用限額之依據。
- (二)財政部台北區支付處:建置國庫資訊管理系統,功能 包括國庫收支資訊、大額支出即時查詢等,因我國之 國庫現金係採國庫單一帳戶(國庫存款戶),國庫存款 戶內之機關支用,均以付款憑單送支付處辦理庫款撥 付作業,經支付處審核其授權條件及預算額度無誤後 辦理支付,現行支付方式包括通匯(約占 90%,委託 財金資訊股份有限公司辦理)及支票(約占 10%,委 时央銀行辦理),支付處每日彙集庫款支出資訊,並 透過中央銀行將國庫收入及庫款餘額等資訊傳輸轉 檔後,產出國庫收支日報表,國庫存款戶內之各預算 機關可透過帳號及密碼登入,查詢機關收支狀況及作 為財政部國庫署辦理國庫現金管理每日執行狀況之

依據。

- (三)中央銀行:我國現金採國庫單一帳戶,由中央銀行辦 理出納、存儲事宜,中央銀行開發建置國庫收支連線 系統,每日彙集中央銀行及轉委託金融機構之國庫收 入繳庫、退回等狀況,透過區域網路以帳號密碼登 入,可供財政部國庫署查詢每日國庫收入明細資料。
- (四)財政部國庫署:為債務管理之目的,開發債務管理資訊系統,以利債務餘額查詢、到期債務還本等管理需求,與為國庫現金管理目的,建立之簡易國庫現金估測作業等。

上開系統皆屬政府財務管理之一環,缺一不可,雖功能完備,惟分屬不同機關及不同架構,在財務管理資訊之運用上,須以人工透過不同系統之查詢始窺全貌,且部分功能亦可互為應用,如能將系統功能予以整合,可結合收支交易之執行、紀錄、控管、考核及報表分析等功能,減少資料重複登載,將有利增進整體政府財務資訊之運用完整性及即時性,提升財務決策之效率及品質,強化政府財務管理之功能。

#### 二、強化現金管理估測資訊自動運算功能

我國現金管理係屬財政部之權責,現行架構透過相關財務管理資訊系統之運用,國庫現金收支及餘額估測機制得以有效運作,除辦理每日、每月、每季之估測,並依據各項最新資訊予以即時更新,透過估測之結果適時擬定各項資金運用策略,包括融資措施及提前償還債

務等規劃,並配合公債及國庫券定期適量發行計畫,兼 顧積極提升國庫資金之運作效能及健全金融市場之發 展等目標。

惟目前我國現金管理之估測作業,受限於各項政府 財務資訊係依不同權責及功能獨立開發,並無整合性資 訊系統支援,國庫現金管理作業多數以人為方式辦理資 訊蒐集、整合、估算及報表編製,致國庫現金估測之準 確度有賴於人員素質及收支單位之配合等相關因素。為 強化現金估測之準確度,以利提升國庫資金管理之決策 品質,並降低資金成本,對於現金估測資訊之作業程 序,可建立系統化、電腦化之現金估測模型,運用系統 對於現金調度資訊之彙整功能,包括歷史收支資料之趨 勢分析、年度預算之額度、即時大額收支之通報與查 詢、債務管理資訊之連結、中央統籌分配稅款之撥付時 程及金額等,透過系統自動擷取及整合各項資訊後,經 以自動運算產製現金收支估測,將可擴大政府財務資訊 可運用範圍及價值,提高現金估測資訊來源完整度、降 低人為主觀判斷及計算錯誤等風險,對於政府現金管理 將有正面之效益。

附件:會議簡報資料

會議議程

#### APEC Forum Workshop Modernization of the Treasury Systems in APEC Economies

#### Kazan, Russia, March 25-27, 2012 Draft Agenda

Sunday, March	25, 2012	Venue : Korston Hotel (TBC)						
19.00	Registration of participants	<b>V</b>						
Monday, March	26, 2012	Venue : Korston Hotel (TBC)						
09.00 - 09.30	Registrations of participants	·						
09.30 - 10.00	Welcome, introductory and organization	on remarks.						
	<ul> <li>Mr. Roman E. Artyukhin, Head of</li> </ul>	f the Federal Treasury of the RF						
-	<ul> <li>Mr. Ildar S. Khalikov, Prime Mi</li> </ul>	inister of Republic of Tatarstan						
	Introduction of workshop participants							
Module 1:	General Trends in Treasury Systems De	evelopment						
10.00 - 11.15	Trends in the Development of Treasury/FMIS Solutions + [30 min] Survey Results on the Current Status of FMIS in APEC economies[25 min] Mr. Cem Dener, World Bank							
•	Questions and Answers	[20 min]						
11.15 - 11.30	Coffee break							
11.30 - 12.15	Presentation of Singapore (Singapore	s FMIS) [30 min]						
	Questions and Answers	[15 min]						
12.15 - 13.00	Presentation of Thailand (Thailand's	experience with GFMIS)[30 min]						
	Questions and Answers	[15 min]						
13.00 - 13.15	Group photograph							
13.15 - 15.00	Lunch							
Module 2:	Financial Management Information Syst	ems						
15.00 - 15.45	Presentation of China (Treasury system development in China)[30 min]							
	Questions and Answers	[15 min]						
15.45 - 16.30	Presentation of the Republic of Korea [30 min]	(Digital Budget Accounting System)						
	Questions and Answers	[15 min]						
16.30 - 17.00	Coffee break							
17.00 - 17.45	Presentation of the Russian Federatio Ms. Elena E. Chernyakova, MoF	n (FMIS) [30 min]						
	Questions and Answers	[15 min]						
17.45 - 18.00	Reflections of the day: General comme	nts/questions on the presentations						
18.30 - 19.00	Cocktails							
19.00 - 20.30	Dinner							

Venue : Korston Hotel (TBC) Tuesday, March 27, 2012 Module 3: Cash Management Expert presentation (Mr. Ian Storkey, Public Financial Mgmt Expert) [40 09.00- 09.50 min] [10 min] Questions and Answers 09.50 - 10.30 Presentation of Chinese Taipei (Cash Management in Chinese Taipei)[30 min] [10 min] Questions and Answers 10.30 - 10.45 Coffee break Treasury and FMIS Development in East Asia Module 4: Presentation of Viet Nam 10.45 - 11.25 (Overview of the TABMIS - Treasury and Budget Mgmt Information System) [30 min] [10 min] Questions and Answers 11.25 - 12.15 Presentation of the Indonesia (SPAN) (Mr. Sudarto, Treasury Expert for DG of Treasury [30 min] [10 min] · Questions and Answers Departure from the hotel 12.30 - 13.00 Official lunch hosted by the Government of the Republic of Tatarstan 13.00 - 15.00 Cultural program 15.00 - 17.00 17.00 Return to the hotel

# 一、國庫及政府財務管理 資訊系統發展趨勢





## Workshop Modernization of Treasury Systems in APEC Economies

## **Trends in the Development of Treasury/FMIS Solutions**

Cem Dener

Kazan, March 2012



## APEC Russia 2012

#### **Contents**

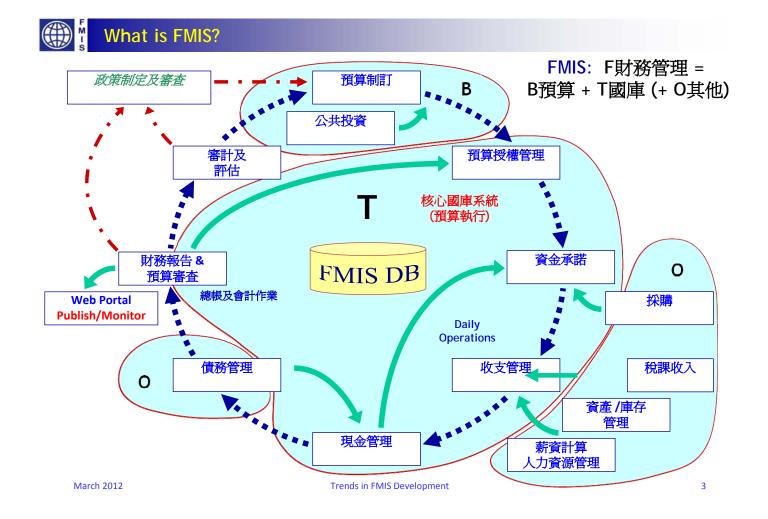
- FMIS terminology
- FMIS Study: 25 Years of WB Experience on What Works and What Doesn't
  - > Key findings of the study, and FMIS prerequisites
  - > Suggested FMIS design & implementation methodology
- Trends in FMIS implementation
  - Consolidating PF data for all budget levels through FMIS
  - > FMIS ICT trends
  - Expansion of FMIS capabilities for spending units (web portals)
  - Improving transparency: disclosure of information on the web
- FMIS in APEC Economies
- FMIS Community of Practice

#### **Definitions**

- ► A Financial Management Information System (FMIS) can be broadly defined as a set of automation solutions that enable governments to plan, execute and monitor the budget, by assisting in the prioritization, execution, and reporting of expenditures, as well as the custodianship and reporting of revenues.
- ► FMIS solutions can contribute to the efficiency and equity of government operations.
- Modern FMIS platforms help governments comply with domestic and international financial regulations and reporting standards, and support decentralized operations through centralized web-based solutions providing access to a large number of authorized budget users at all levels.
- ► In summary, FMIS solutions offer a great potential for increasing predictability, participation, transparency and government accountability.

March 2012 Trends in FMIS Development

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FMIS terminology



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March 2012

Trends in FMIS Development

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#### **FMIS Study**

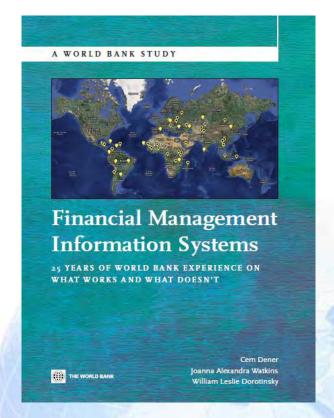
# Financial Management Information Systems

25 Years of World Bank Experience on What Works and What Doesn't

April 2011

#### Objective

In conjunction with the development of a new World Bank FMIS database in 2010, this World Bank Study seeks to identify trends in the design and implementation of FMIS solutions in World Bank funded projects (1984-2010), and share observed/reported achievements, challenges and lessons learned with interested parties.





## FMIS Database (2012)

WB	Funded Treasury/FMIS Projects	Closed	Active	Pipeline	Projects
Afric	a	14	10	0	24
1	Burkina Faso	1			1
2	Cape Verde	1			1
3	Congo, Democratic Republic of		1		1
4	Gambia, The	1	1		2
5	Ghana	1	1		2
6	Kenya	2			2
7	Liberia		2		2
8	Madagascar	1	1		2
9	Malawi	2			2
10	Nigeria	1	1		2
11	Sierra Leone	1	1		2
12	Tanzania		1		1
13	Uganda	2			2
14	Zambia	1	1		2
East	Asia and Pacific	4	6	2	12
1	Cambodia		1	1	2
2	China	1			1
3	Indonesia	1	1		2
4	Lao People's Democratic Republic	1		1	2
5	Mongolia	1	2		3
6	Timor-Leste		1		1
7	Viet Nam		1		1
Euro	pe and Central Asia	8	6	3	17
1	Albania	2		1	3
2	Armenia			1	1
3	Azerbaijan	1			1
4	Georgia		1		1
5	Hungary	1			1
6	Kazakhstan	1			1
7	Kyrgyz Republic		1		1
8	Moldova		1	1	2
9	Russian Federation		1		1
10	Slovak Republic	1			1
11	Tajikistan		1		1
12	Türkiye	1			1
13	Ukraine	1	1		2

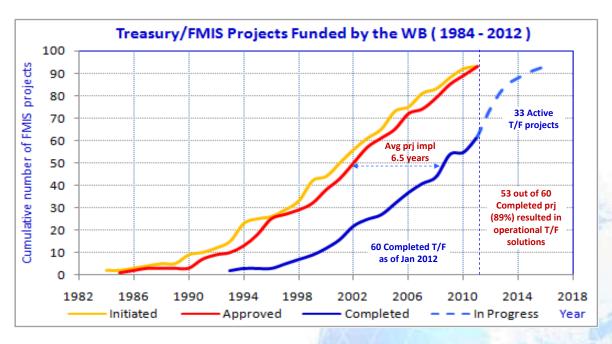
## WB Funded Treasury/FMIS Projects (1984-2012)

WBI	Funded Treasury/FMIS Projects	Closed	Active	Pipeline	Projects
Latin America and Caribbean		26	7	0	33
1	Argentina	2			2
2	Bolivia	3			3
3	Brazil	2			2
4	Chile	2	1		3
5	Colombia	2	1		3
6	Ecuador	3			3
7	El Salvador	1	1		2
8	Guatemala	3			3
9	Honduras	2	1		3
10	Jamaica	2			2
11	Nicaragua	3	1		4
12	OECS countries		1		1
13	Panama		1		1
14	Venezuela, Republica Bolivariana de	1			1
Mide	Middle East and North Africa		1	0	3
1	Algeria	1			1
2	Yemen, Republic of	1	1		2
Sout	South Asia		3	0	9
1	Afghanistan	4	1		5
2	Bangladesh		1		1
3	Maldives	1			1
4	Pakistan	1	1		2
54	countries	60	33	5	98

March 2012 Trends in FMIS Development



## FMIS Projects (2012)



Since 1984, the WBG has financed 93 completed/active projects in 54 countries totaling over US \$2.4 billion (Total cost: \$3.6 billion).



## **Key Findings of the FMIS Study**

- ► The political commitment and ownership of the borrower matter.
- Success depends on adequate preparation.
- FMIS priorities and sequencing should be addressed carefully.
- A focus on developing institutional capacity, early in the process, is crucial.
- ► FMIS implementation is complex enough to deserve a dedicated project.
- ▶ The type of FMIS solution influences implementation.
- ▶ The presence of an ICT expert in the World Bank Team is important.
- ► The total number and complexity of procurement packages influence project duration.
- ▶ FMIS projects disburse late due to large ICT contracts, completed at later stages.
- ▶ ICT related risks need to be clearly identified during project preparation.

March 2012

Trends in FMIS Development

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#### **FMIS Prerequisites**

## **Prerequisites for FMIS ICT Solutions**

#### **Functional aspects**

- Improvement of budget classification (key segments for funding source, organizational, functional, and economic classifications, program / project / activity codes)
- Development of a unified chart of accounts, integrated with budget (economic) classification
- Improvement of treasury single account operations (moving towards centralized TSA)
- Development of commitment control and monitoring mechanisms
- Establishment of cash management functions

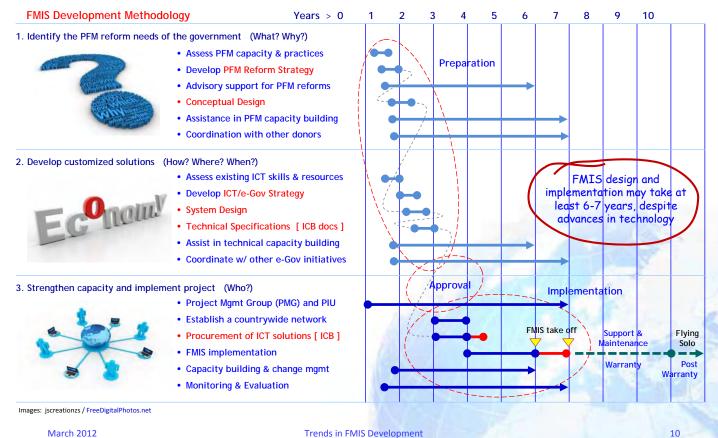
#### **Technical aspects**

- Establishment of a secure countrywide communication network
- Preparation of system/data centers

#### **Human resources**

Presence of a core team of ICT specialists within PFM organizations







#### **APEC Russia 2012**

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#### Trends in FMIS implementation

- Consolidating PF data for all budget levels through FMIS
- FMIS ICT trends
- Expansion of FMIS capabilities for spending units (web portals)
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## Consolidating PF Data through FMIS

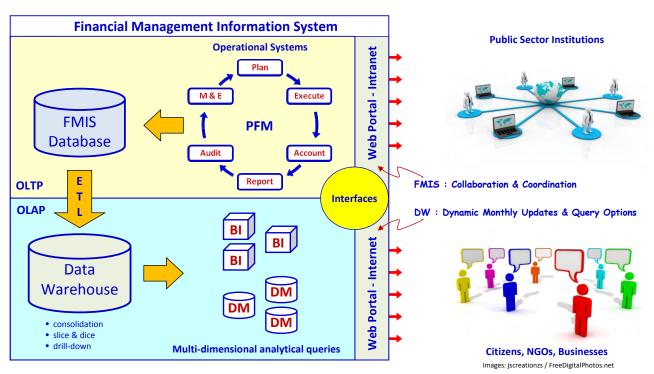
- ► Most countries benefit from an information system to consolidate detailed Public Finance (PF) datasets for public expenditure analysis and more.
- ▶ Next generation FMIS solutions are being designed to combine PFM operational systems (OLTP) with powerful Data Warehouse capabilities and multi-dimensional analytical queries (OLAP) to assist in effective forecasting/planning, performance monitoring and decision support.
- ► However, a large number of countries publish "static" PF data (worksheets or documents), derived from FMIS Database or other information systems.
- Some of the countries publish "dynamic" PF data, produced and posted from the integrated FMIS DB and/or Data Warehouse automatically.
- ► Integrated FMIS solutions also facilitate the timely disclosure of PF data to citizens/NGOs/businesses through web portals, for improving participation, fiscal transparency and government accountability.
- ► However, consolidation of PF data using a unified budget classification/chart of accounts for all budget levels remains to be the main challenge.

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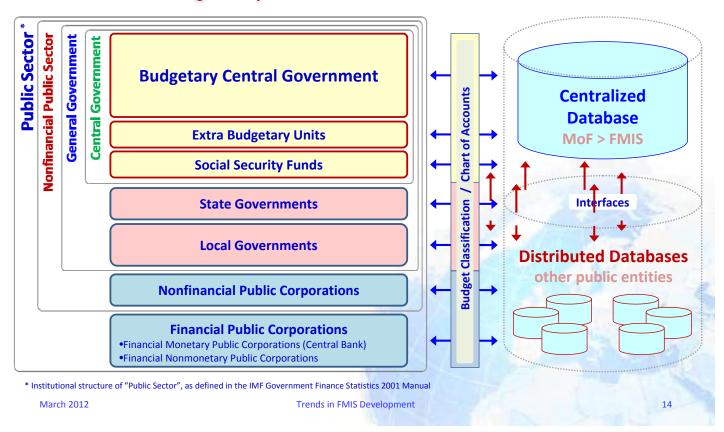
#### **Trends**

### Goal: Daily Recording & Reporting of Public Finance Data through FMIS



OLTP : Online Transaction Processing OLAP : Online Analytical Processing ELT : Extract, Transform, Load BI : Business Intelligence DM : Data Minin,

#### Challenge: Scope and Source of Public Finance Data





#### **FMIS ICT Trends**

## **Using ICT Effectively in FMIS Projects**

Some of the instruments that can be used in FMIS projects to improve the reliability, cost effectiveness and accountability of information systems include:

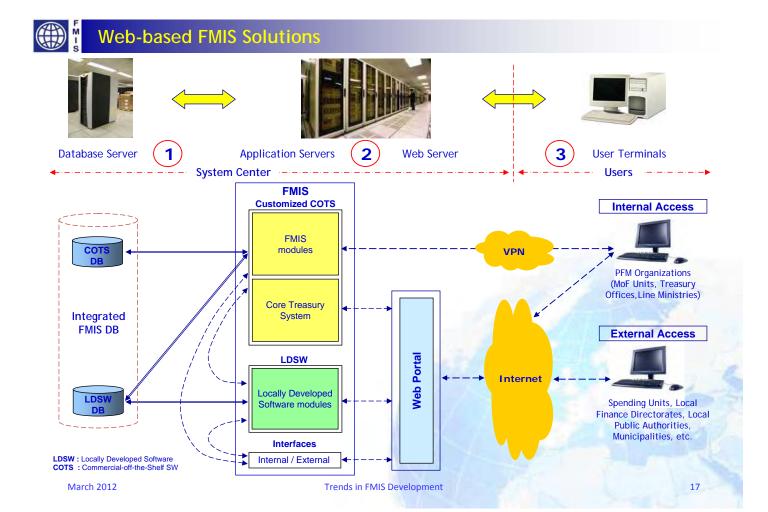
- ▶ Using Electronic Payment Systems (EPS) for all government payments
- ▶ Benefiting from digital / electronic signature for all financial transactions
- **▶** Electronic records management
- ► Publishing the budget execution results and performance monthly on the web (effective use of web portals)
- ▶ Focus on the interoperability and reusability of information systems
- ► FMIS development and project management based on industry standards
- ▶ Using Free/Libre Open Source Software (FLOSS) in PFM applications

## **Support for Spending Unit Operations**

- ► Spending Units (SUs) usually perform the following PFM functions, which can be supported through centralized web-based FMIS solutions:
  - Budget preparation
  - Budget execution
  - Accounting and reporting
  - Asset / inventory management
  - > HRMIS / payroll
  - Procurement
  - Performance monitoring
  - Other sector specific operations

- Modes of SU operations:
- Manual
- Separate software solutions
- · Ministry specific applications
- Connection to centralized FMIS (usually through a web portal)
- There are two common ways to support SU operations through a centralized webbased FMIS solution:
  - Web portal access (secure connection via Internet or intranet)
  - Direct access (through secure intranet) <>< costly and more difficult</p>
- ▶ Web portals can also be used to facilitate the communication between the SUs and the line ministries/agencies they are subordinated.

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## **Publishing Results from Treasury Systems/FMIS**

- ▶ About 75% of the countries (42 out of 53) included in FMIS database, publish budget execution results on the web regularly. 32 out of 42 published results are available in English as well.
- ▶ Out of 42 published results, 39 web reports are static (presentation of results through files produced from DB).
- ► Only 3 web sites provide dynamic links to the DB for interactive queries for users.
- ► Most of the results are published as consolidated budget plans vs. actuals. Details of expenditures and dynamic monthly updates from FMIS DB are not visible yet.
- ► A new web site presenting the status of information disclosure based on Treasury/FMIS databases will be prepared and updated regularly to share the trends.

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#### **Conclusions**

#### **Conclusions**

- ► FMIS is a complex system, which constantly evolve and expand in parallel to changes in PFM needs and advances in technology. Leadership, collaboration and innovation are important.
- ▶ It is very important to clarify key 'design parameters' and identify 'which solution fits which problem in what situation' at early stages of the project/system design.
- ► There is a growing interest in the development of new customizable platforms based on open source software and other innovative solutions to meet core FMIS requirements at a reasonable cost.
- ▶ Development of common web publishing standards and formats (e.g. open data initiative) is important to improve the accountability and transparency in PFM domain.
- ► The improvement of knowledge sharing and learning among the countries involved in FMIS development is crucial (communities of practice / peer learning platforms in various regions).

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#### FMIS in APEC Economies

• FMIS Community of Practice

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### **FMIS in APEC Economies**

	APEC Economies	T/F	eGo	ov 2012	FMIS Solution	WB activity*	Web Link
XIS.	Australia	FMIS	12	0.8390	CBMS redevelopment initiated in Sep 2011. Dep	-	www.finance.gov.au
1	Brunei Darussalam	T > FMIS	54	0.6250	TAFIS (centralized) active since 2005; fully opera	-	www.finance.gov.bn
•	Canada	FMIS	11	0.8430	Dept FMIS solutions (decentralized) since 1997	-	www.fin.gc.ca
	Chile	FMIS	39	0.6769	SIGFE-II (centralized) in progress	P103441	www.hacienda.cl
•3	China	FMIS	78	0.5359	Treasury (centralized) > FMIS operational	TA	www.mof.gov.cn
会	Hong Kong, China	T > FMIS			Treasury (centralized) > core FMIS at central leve	-	www.fstb.gov.hk
	Indonesia	T > FMIS	97	0.4949	SPAN (centralized) impl in progress	P085133	www.depkeu.go.id
•	Japan	FMIS	18	0.8019	National Treasury System (decentralized)	-	www.mof.go.jp
<b>(•)</b>	Republic of Korea	FMIS	1	0.9283	dBrain (centralized) active since 2007	Collaboration	english.mosf.go.kr
•	Malaysia	FMIS	40	0.6703	FMIS (decentralized)	TA	www.treasury.gov.my
0	Mexico	T > FMIS	55	0.6240	SIDAFF (centralized) (WB FBS)	P126616	www.shcp.gov.mx
XK :	New Zealand	FMIS	13	0.8381	Dept FMIS solutions (decentralized)	-	www.treasury.govt.nz
	Papua New Guinea	T > FMIS	177	0.2147	Treasury (centralized)	-	www.finance.gov.pg
	Peru	FMIS	82	0.5230	SIAF-SP (centralized) in progress (IADB prj)	TA	www.mef.gov.pe
	Philippines	T > FMIS	88	0.5130	Treasury (decentralized) (WB TA+AusAID Grant)	P117605	www.dof.gov.ph
	The Russian Federation	T > FMIS	27	0.7345	FTAS (centralized) active since Sep 2011; new eB	P064508	www.minfin.ru
<u> </u>	Singapore	FMIS	10	0.8474	FMIS (centralized)	-	www.mof.gov.sg
<b>(2)</b>	Chinese Taipei	T > FMIS			Treasury (centralized); FMIS pilot implementation	-	www.mof.gov.tw
	Thailand	FMIS	92	0.5093	GFMIS (centralized) (WB TA)	TA	dwfoc.mof.go.th
- SEE	United States	FMIS	5	0.8787	Federal/State FMIS solutions (decentralized)	-	www.treasury.gov
*	Viet Nam	T > FMIS	83	0.5217	TABMIS (centralized) rollout in progress	P075399	www.mof.gov.vn

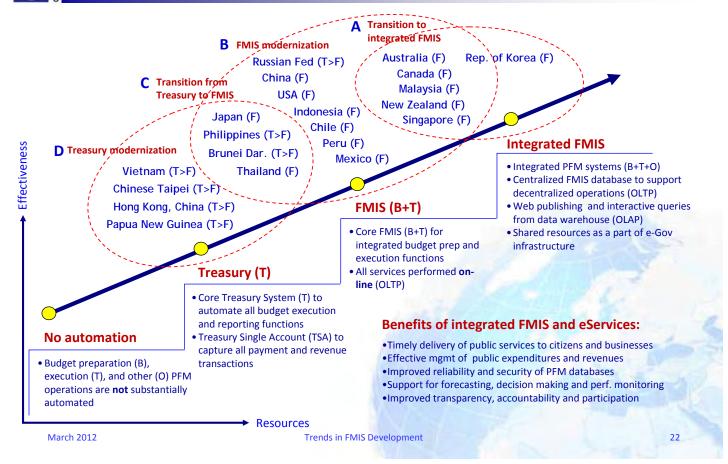
(\*) WB funded Treasury/FMIS projects (project ID) / PFM advisory support (TA)

Treasury : Treasury system for budget execution, accounting and reporting

FMIS: Financial Mgmt Information System (FMIS) for budget preparation, execution, acct, reporting, asset/inventory, HR/payroll

T > FMIS : Transition from Treasury to FMIS

### **Towards Integrated FMIS**





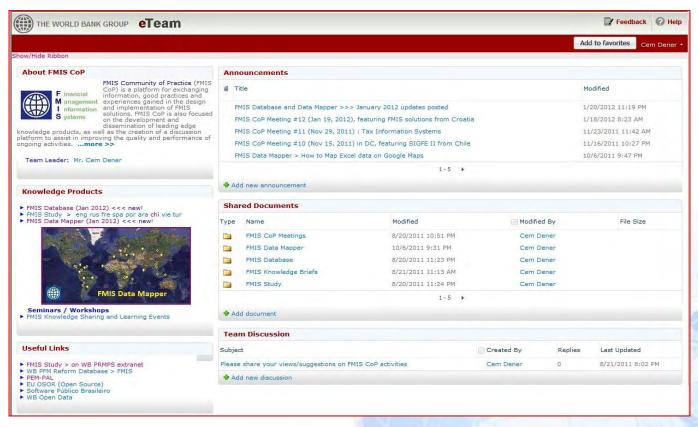
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## FMIS Community of Practice



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#### **FMIS Community of Practice**

- Established in Sep 2010, as a platform for exchanging information, good practices and experiences gained in the design & implementation of FMIS solutions, mainly with the client countries, project teams and development partners.
- ► FMIS CoP is also focused on the development and dissemination of leading edge knowledge products, as well as the creation of a discussion platform to assist in improving the quality and performance of ongoing FMIS activities.
- ► FMIS CoP membership is open to all specialists and officials from interested countries and development partners, who wish to communicate and collaborate for the improvement of Public Financial Management (PFM) practices through FMIS solutions.

#### **FMIS CoP - Knowledge Products**

- ► FMIS Database contains a rich set of operational data and performance ratings for the benefit of task teams, as well as the client countries involved in Treasury/FMIS projects (98 projects from 54 countries as of Jan 2012).
- ► FMIS Study (1984-2010) presents the World Bank's experience with FMIS to share the achievements and challenges observed, and provide guidance for improving the performance of future projects. The findings of this report are primarily based on a comprehensive database of 55 completed + 32 active Treasury/FMIS projects in 51 countries (as of Aug 2010).

Available in nine languages: eng rus fre spa por ara chi tur vie

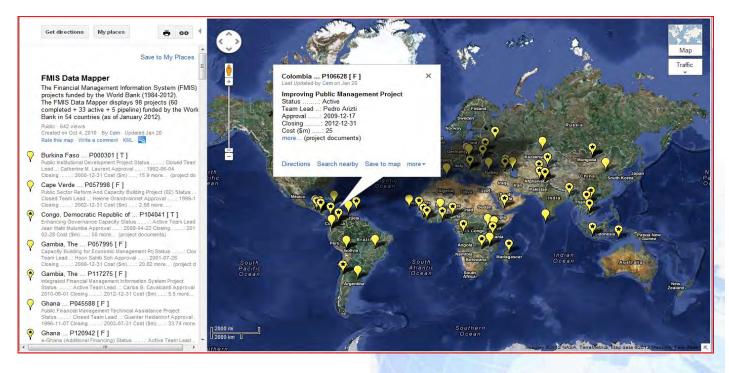
► FMIS Data Mapper is available on Google Maps to present the key FMIS project information through an interactive customized map of the world.

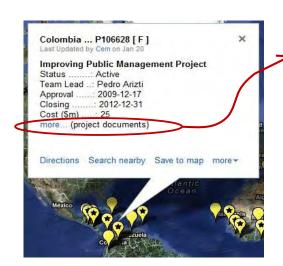
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#### **FMIS Data Mapper**

### **FMIS Data Mapper on Google Maps**





March 2012





www.worldbank.org/publicsector

## **Thank You**





## Workshop Modernization of Treasury Systems in APEC Economies

## A Survey on the Current Status of Treasury Systems in APEC Economies

Kazan, March 2012



#### Survey Results - 1

2. Public entity responsible for Treasury functions (Budget Execution)

Ministry of Finance

• CHN, JPN, KOR, PER, SNG, THA

Treasury

• CTP, MEX, NZL, RUS, VNM State Owned Bank/ Central Bank

Other

- CHL (Budget Office)
- HKG (Oper. Depts.)
- PHL (Treasury, SOB)
- USA (OMB)

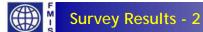
#### 3. Main functions of the Treasury

APEC Economy	Daily transactions through STA	Accounting of revenue receipts and payments	Authorization of payments	Other
CHL Chile	+	+		+ (stats, annual budg)
CHN China	+	+	+	
CTP Chinese Taipei	+	+	+	
HKG Hong Kong, China		+		+ (paymaster)
JPN Japan		+	+	
KOR Republic of Korea	+	+	+	
MEX Mexico	+			
NZL New Zealand		+		
PER Peru	+			
PHL Philippines		+		
SGP Singapore	+	+	+	+ (fin statm, cash)
THA Thailand	+	+	+	
RUS The Russian Federation	+	+	+	
USA United States of America		+		+ (econ policy)
VNM Viet Nam	+	+	+	

March 2012

APEC FMIS Workshop - Kazan

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- 4. Is the Treasury involved in accounting and redistribution of Revenues?
- 6. Is the Treasury involved in accounting and disbursement of Expenditures?
- 8. Is the Treasury involved in Authorization of revenues & expenditures?

- **5.** If Yes, budget levels covered
- 7. If Yes, budget levels covered
- **9.** If Yes, budget levels covered

	Acct +	redistr of Re	venues	Acct +	disb of Expe	nditures	Autho	rization of re	v + exp
APEC Economy	Central Budget	Regional Budget	Local Budget	Central Budget	Regional Budget	Local Budget	Central Budget	Regional Budget	Local Budget
Chile	+	+		+	+		+	+	
China	+			+			+		
Chinese Taipei	+			+			+		
Hong Kong, China	+			+				No	
Japan	+			+			+		
Republic of Korea	+			+			+		
Mexico		No		+				No	
New Zealand	+			+			+		
Peru	+	+	+	+	+	+	+	+	+
Philippines	+	+		+	+	+		No	
Singapore		No		+			+		
Thailand		No		+				No	
Russian Federation	+	+	+	+	+ (agrmt)	+ (agrmt)	+	+ (agrmt)	+ (agrmt)
U.S.A.	+			+				No	
Viet Nam	+	+	+	+	+	+	+	+	+
March 2012			APEC FMI	S Workshop - Kaza	an				2



## Survey Results - 3

**10**. **Treasury controls the** execution of budgets (managing and reporting China a

**APEC Economy** Control **Form of Control** Central Regional **Local Budget Execution Budget Budget** + + Ex-ante Yes Ex-ante

(managing and reporting	China	Yes	Ex-ante			
all daily transactions)	Chinese Taipei	Yes	Ex-ante	+		
	Hong Kong, China	No				
	Japan	No				
<b>11.</b>	Republic of Korea	Yes	Ex-post	+		
If Yes, budget levels covered	Mexico	Yes	Ex-ante	+		
0070.00	New Zealand	No				
12.	Peru	Yes	Ex-ante	+	+	+
If Yes, form of control	Philippines	No				
	Singapore	Yes	Ex-ante	+		
	Thailand	Yes	Ex-ante	+		
	Russian Federation	Yes	Ex-ante+Current	+	+ (agrmt)	🛨 (agrmt)
	U.S.A.	No				
	Viet Nam	Yes	Ex-ante	+	+	+

**13.** Recipients of budgetary funds open accounts in?

Treasury

• VNM

• CTP, JPN, KOR, MEX, PER, PHL, RUS, THA

**Central Bank** 

Commercial Banks

• CHN, NZL, SNG

• CHL (centr/com banks)
• HKG, USA

14.
Is Treasury providing cash to recipients of budget funds?

**15.** If Yes, form of cash payments

APEC Economy	Cash Payments	Bank Cards	Checks	Other
Chile	No			
China	No			
Chinese Taipei	No			
Hong Kong, China	No			
Japan	No			
Republic of Korea	No			
Mexico	Yes			+ (Bank accts)
New Zealand	No			
Peru	No			
Philippines	No?		<b>+</b> ?	
Singapore	No			
Thailand	No			
Russian Federation	Yes	+	+	
U.S.A.	No			
Viet Nam	Yes			+ (Cash paym)

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## Survey Results - 5

16.
Type of legal act regulating the Treasury activities

Law
• CHL, CHN, HKG, MEX, NZL,

PHL, THA, VNM

By-law (secondary legislation)

• CTP, JPN, KOR, PER, RUS, SNG, USA

Both

17.
Total number of Treasury Offices

**18.** Total number of Treasury Staff

APEC Economy	Total # Office/Staff	Central Level	Regional Level	Local Level
Chile	1/393	1/393	-	-
China	3,237 / 31,630	1/130	36 / 1,500	3,200 / 30,000
Chinese Taipei	233 / 913	1 / 146	÷	232 / 767
Hong Kong, China	1 / 487	1 / 487	-	-
Japan	970 / ?	970 / <mark>?</mark>	-	-
Republic of Korea	1/?	1/?	-	-
Mexico	1/?	1/?	-	-
New Zealand	1/397	1/397	-	-
Peru	2,509 / ?	285 / 46?	388 / ?	1,836 / ?
Philippines	15 / 400	1/100	14 / 300	-
Singapore	1 / 2,500	1 / 2,500	-	-
Thailand	77 / 1,985	1/877	76 / 1,108	-
Russian Federation	2,271 / 50,878	1 / 407	83 / 36,584	2,187 / 13,887
U.S.A.	1/?	1/?	-	-
Viet Nam	714 / 14,166	1/388	63 / <mark>?</mark>	650 / 13,778

**APEC Economy** 

Chile

China

STA

Yes

Yes

19.
Is there a Single
Treasury Account (both for revenues and expenditures)

**20.** Mode of STA operations

**21.** Which budget levels are serviced with STA?

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	Chinese Taipei	Yes	Client	+			
	Hong Kong, China	No	-				
	Japan	Yes	Correspond.	+			
S	Republic of Korea	Yes	Correspond.	+	+	+	
	Mexico	Yes	Correspond.	+			
	New Zealand	No	-				
е	Peru	Yes	Client	+	+	+	
	Philippines	No	-				
	Singapore	Yes	Client	+			
	Thailand	Yes	Client	+			
	Russian Federation	Yes	Client	+	+	+	
	U.S.A.	Yes	Correspond.	+			
	Viet Nam	<b>Æ€</b> FMI	s worksh <b>Glient</b> an	+	+	+	

Operational

Mode of STA

Client

Client

Central

Budget

+

+

Regional

Budget

+

Local

**Budget** 

Supl / Off

**Budget** 

## Survey Results - 7

**22.**Current status of Treasury
Information System

23.
Number of Treasury
IS users

24.
Technology
architecture of the
Treasury IS

APEC Economy	Treasury Info System Status	Treasury IS Tech Arch			Local Users
Chile	Operational (C+L)	Web-based		6,500	
China	Operational (C+L)	Web-based	120	120 700	
Chinese Taipei	Operational (C+L)	Web-based	146	-	767
Hong Kong, China	Operational (C)	Web-based	5,400	-	-
Japan	Operational (C)	Web-based	?	-	-
Republic of Korea	Operational (C+L)	Web-based		58,000	
Mexico	Operational (C)	Web-based	11,300	-	-
New Zealand	Operational (C)	Web-based	500	-	-
Peru	Operational (C+L)	Decentralized	1,476	1,940	9,180
Philippines	In progress	Web-based	Web-based 100 300		
Singapore	Operational (C+L)	Web-based		2,500	
Thailand	Operational (C)	Web-based	?	-	-
Russian Federation	Operational (C+L)	Web-based			20,000
ΙΙς Δ	APEC FMIS Workshop - Kaza  Operational (C)	weh C-S	2	_	7

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25. Current status of Financial Mgmt Information System (FMIS)

**27.** Duration of FMIS implementation

28. Cost of FMIS implementation

33. Number of FMIS Internal Users

March 2012

APEC Economy	FMIS Status	Duration of FMIS Impl.	Cost of FMIS Impl.	Cent Users	Reg Users	Local Users
Chile	Fully Operational	6 – 8 years	\$ 25 - 50 m	160	-	-
China	<b>Fully Operational</b>	> 8 years	> \$ 50 m	120	700	9,000
Chinese Taipei	Pilot Implement.	> 8 years	> \$ 50 m	146	-	767
Hong Kong, China	<b>Fully Operational</b>	4 – 6 years	\$ 25 - 50 m	9,200	-	-
Japan	Fully Operational	> 8 years	?	?		
Republic of Korea	Fully Operational	6 – 8 years	> \$ 50 m		58,000	
Mexico	Fully Operational	6 – 8 years	\$ 10 - 25 m	40	-	-
New Zealand	Fully Operational	< 4 years	< \$ 5 m	100	-	-
Peru	Fully Operational	4 – 6 years	\$ 25 - 50 m	1,476	1,940	9,180
Philippines	Project Initiated	4 – 6 years	> \$ 50 m	200	500	-
Singapore	Fully Operational	< 4 years	\$ 10 - 25 m		2,500	
Thailand	Fully Operational	< 4 years	?	204	180	-
Russian Fed.	Project Initiated APEC FMIS Worksho	4 – 6 years	?	-	-	8



## Survey Results - 9

#### 26. Status of existing/planned automation solutions for FMIS components

FMIS Modules / System Solutions	Separate Software	A component of FMIS			
Macro Economic Forecasting	CHL (O), CTP (O), HKG (O), MEX (O), PER (P), RUS (O), SGP (O), THA (O), USA (O)	CHN (P), PHL (P)			
Public Investment Planning	CHL (O), CTP (O), MEX (D), PER (P), PHL (P), RUS (O), SGP (O), USA (O)	CHN (P), KOR (O)			
<b>Budget Preparation</b>	CTP (O), HKG (O), JPN (O), PER (O)	CHL (O), CHN (O), KOR (O), MEX (O), NZL (O), PHL (D), RUS (P), SGP (O), USA (O)			
Budget Execution (Treasury) Sys					
Management of Revenues	THA (O), VNM (O)	CHL (O), CHN (O), CTP (O), HKG (O), JPN (O), KOR (O), MEX (O), PER (O), PHL (D), RUS (O), SGP (O), USA (O)			
• Liabilities / Procurement	CTP (O), HKG (O), SGP (O), USA (O)	CHL (O), CHN (O), KOR (O), MEX (O), PER (O), PHL (D), RUS (O), THA (O), VNM (O)			
Mgmt of Expenditures		CHL (O), CHN (O), CTP (O), HKG (O), JPN (O), KOR (O), MEX (O), NZL (O), PER (O), PHL (D), RUS (O), SGP (O), THA (O), USA (O), VNM (O)			
Cash / Fund Management	CHL (D)	CHN (D), CTP (O), HKG (O), KOR (O), MEX (D), NZL (O), PER (O), PHL (D), RUS(O), SGP (O), THA (O), USA (O), VNM (O)			
General Ledger		CHL (O), CHN (O), CTP (O), HKG (O), JPN (O), KOR (O), MEX (O), NZL (O), PER (O), PHL (D), RUS (O), SGP (O), THA (O), USA (O), VNM (O)			
Financial Statements	USA (O)	CHL (O), CHN (P), CTP (O), HKG (O), JPN (O), KOR (O), MEX (D), NZL (O), PER (O), PHL (D RUS (O), SGP (O), THA (O), VNM (O)			
Asset / Inventory Mgmt	CHL (D), CHN (O), CTP (O), HKG (O), USA (O)	KOR (O), MEX (P), PER (O), PHL (P), RUS (P), SGP (O), THA (O), VNM (P)			
Internal Debt Management	MEX (O), NZL (O), PER (O), PHL (D), THA (O), USA (O), VNM (O)	CHL (O), CHN (O), CTP (O), KOR (O), RUS (P), SGP (O)			
External Debt and Aid Mgmt	CHL (O), NZL (O), PER (O), PHL (O), THA (O), USA (O), VNM (O)	CHN (P), CTP (O), KOR (O), MEX (O), RUS(P), SGP (O)			
Personnel Database (HRMIS)	CHL (O), CHN (P), CTP (O), HKG (O), KOR (O), PER (O), SGP (O), THA (O), USA (O), VNM (O)	MEX (D), PHL (D), R <mark>US (P)</mark>			
Payroll Calculations	CHL (O), CTP (O), HKG (O), KOR (O), PER (O), SGP (O), THA (O), USA (O), VNM (O)	CHN (O), PHL (D), RUS (P)			
Support for Auditing	CHL (D), CHN (P), CTP (O), HKG (O), KOR (O), PER (O), USA (O)	NZL (O), PHL (D), RUS (P), SGP (O)			
Web Portal for Spending Units	PER (O), USA (O)	CHL (O), CHN (O), CTP (O), JPN (O), KOR (O), MEX (O), NZL (O), PHL (D), RUS (O), SGP (O			
Data Warehouse (MIS) Responses (15 APEC Economies): CHL, CHN	HKG (P), PER (P) , CTP, HKG, JPN, KOR, MEX, NZL, PER, PHL, RUS, SGP, THA, USA, VNM (O): (	CHL (O), CHN (P), CTP (O), JPN (O), KOR (O), MEX (O), PHL (P), RUS (P), SGP (P), THA (O) Operational (D) Under development  하는 사람이 하는 (P)			



29. Web publishing PF data (rev/exp and budget perf.)

**30.** PF data from FMIS/DW?

31. FMIS/DW access via web portal?

**32.** Contribution of FMIS to PFM practices

APEC Economy	Web Publish	PF data fm FMIS/DW	FMIS/DW web portal	OLTP Trans	OLAP Dec Sup	Other
Chile	Yes	Yes	No	+	+	
China	Yes	Yes	Yes	+		
Chinese Taipei	Yes	No	Yes	+	+ (F)	
Hong Kong, China	Yes	No	No	+	<b>+</b> (F)	+ (Gov acct)
Japan	Yes	No	Yes	+		
Republic of Korea	Yes	No	Yes	+	+	
Mexico	Yes	Yes	No	+		
New Zealand	Yes	Yes	Yes	+	<b>+</b> (DW)	
Peru *	Yes	Yes	Yes	+	+ (DW)	
Philippines	Yes	No	No	+		
Singapore	Yes	Yes	Yes	+	+ (DW)	
Thailand	No	No	No	+		
Russian Federation	Yes	No	No	+	+	
U.S.A.	Yes	No	Yes	+		
Viet Nam	Yes	Yes	No	+	<b>+</b> (F)	

DW: Data Warehouse linked with FMIS (F) database

OLTP: Online Transaction Processing > daily rev/exp transactions and reporting

**OLAP:** Online Analytic Processing > decision support (data mining; business intelligence)

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## Survey Results - 11

## 34.

Web portal for Spending Units?

**35.** Authentication method for SU web portal

**36.**Number of SUs using FMIS web portal

**37.** Type of SU access to FMIS

**38.** Number of SU external users

	APEC Economy	Portal for SUs	SU Authen	SU FMIS Access	Central SUs/Users	Regional SUs/Users	Local SUs/Users
	Chile	Yes	Login	Portal		? / 6,500	
	China	Yes	Token	Portal	13,000/13,000	30,000/60,000	35,000/700,000
	Chinese Taipei	Yes	Login	Portal	225 / ?		
	Hong Kong, China	No	-	-	1,600 / ?		
	Japan	Yes	None	Portal	970 / ?		
	Republic of Korea	Yes	Token	Portal		? / 58,000	
g	Mexico	Yes	Login	Portal	1,229 / 11,300		
	New Zealand	Yes	IP Addr	Portal	42 / 400		
	Peru	Yes	Login	Portal	285 / ?	368 / ?	1,836 / ?
	Philippines	No	-	-	? / 70	? / 250	
)	Singapore	Yes	Login	Portal	15 / 2,500		
	Thailand	No	-	Direct	?/?		
	Russian Fed.	Yes	Digi Sign	Portal	20,000 / ?	35,000 / ?	150,000 / ?
	U.S.A.	Yes	Login	Web/MF	?/?		
	Viet Nam	No	-	-	37 / ?		303 / ?

 $<sup>{\</sup>color{red}^*\underline{}} http://www.mef.gob.pe/index.php?option=com\_content \&view=article \&id=504 \&ltemid=100944 \&lang=es.pdf.$ 



#### **39.** SU functions supported by FMIS web portal

#### **40.** Is Electronic/Digital Signature used in FMIS?

APEC Economy	Digital Sign	Budget Prep	Budget Exec	Financial acct + reporting	Non-financial asset mgmt	Personnel DB + Payroll	Procurement / Purchasing	No portal support
Chile	No		+	+	+		+	
China	Yes	+	+					
Chinese Taipei	Yes	+	+	+				
Hong Kong, China	Yes							✓
Japan	No		+	+				
Republic of Korea	Yes							✓
Mexico	Yes	+	+	+				
New Zealand	No	+		+				
Peru	Yes		+	+				
Philippines	Yes	+	+	+		+	+	
Singapore	Yes	+	+	+	+			
Thailand	Yes							✓
Russian Fed.	Yes		+					
U.S.A.	Yes	+	+	+	+			
Viet Nam	No							✓

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#### Survey Results - 13

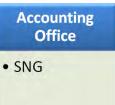
# 41. Public Entity Responsible for Cash/Liquidity Mgmt

	Finance
•	CHL, CHN, JPN, KOR, MEX, RUS, THA

Ministry of

Treasury					
•	CTP, HKG, NZL, PER, PHL, RUS, USA, VNM				

# Dispatcher



# **42.** Key institutions drawing up liquidity forecasts

	Finance
•	CHL, CHN, JPN, KOR, MEX, PHL, RUS, THA, VNM

Ministry of

	and the same of
•	CTP, HKG, NZL, PER, PHL, RUS, USA, VNM

Treasury

	Other
•	PHL (Cent Bank)

## 43. Does this forecast encompass all the government cash receipts and payments? Yes (for all, except Philippines > also contingent liabilities)

#### 44

Time frame for initial liquidity forecasts?

**45.** Forecast update frequency

**46.a** Compare plans vs. actuals?

46.b

**Deviations identified?** 

**46.c** Consultations for adjustments?

**46.d** Actions aligned with forecasts?

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APEC Economy	Forecast timeframe	Update Frequency	Compare plans/act	Identify deviations	Consult for adjustment	Actions aligned
Chile	Year	Monthly	Yes	Yes	Yes	Yes
China	Month	Monthly	Yes	Yes	Yes	Yes
Chinese Taipei	Month	Daily	Yes	Yes	Yes	Yes
Hong Kong, China	Month	Daily	Yes	Yes	Yes	No
Japan	Year	Weekly	Partially	Partially	Partially	No
Republic of Korea	Quarter	Monthly	Yes	Yes	Yes	Yes
Mexico	Year	Daily	Yes	Partially	Yes	Yes
New Zealand	Year	Daily	No	Partially	Partially	Yes
Peru	Month	Monthly	Partially	Partially	Partially	Partially
Philippines	Year	Month	Yes	Yes	Yes	Yes
Singapore	Year	Quarterly	Yes	Yes	Yes	Partially
Thailand	Month	Monthly	Yes	Yes	Yes	Yes
Russian Fed.	Month	Monthly	Yes	Yes	Yes	Yes
ΙΙς Δ	Vear?	MIS Workshop - Kazan Daily	Vac	Vac	Vac	Dartially



## Survey Results - 15

47.
Main issues in preparing liquidity forecast

48. Sharing forecasts w/ budget exec managers

**49.**Basis for preparation of the borrowing program

	Iss	ues in lic	quidity f	orecast prep	jā.	Basis for Borrowing Prog			
APEC Economy	Lack of informatio	Unreliable informatio	Frequent changes	Other	Sharing liquid. forecast	Budget	Liquidity forecast	Other	
Chile				+ (macro var)	Yes		+		
China	×				Yes	+			
Chinese Taipei		×			Yes	+	+	+ (bond+int)	
Hong Kong, China				<b>≭</b> (receipts)	Yes			+ (bond prg)	
Japan	×				No		+		
Republic of Korea			×		Yes		+		
Mexico	×				Yes		+		
New Zealand	×	×			No	+	+		
Peru	×				Yes			+ (mult MEF)	
Philippines	×				Yes	+			
Singapore				<b>×</b> (chng req)	Yes			+ (mark dev)	
Thailand					Yes	+			
Russian Fed.					Yes	+			
U.S.A.				×	Yes				
Viet Nam	×				Yes	+			



**50.** Idle balances of the state funds to manage?

51.
Instruments used in managing idle balances

**52.** Entities involved in managing idle balances

	Ģ.	Instruments for idle balances			Entities involved				
APEC Economy	Idle Balances?	Placement on bank dep.	Buy/sell Securities	Short term credits	Other	Ministry of Finance	Treasury	Central Bank	Other
Chile	Yes	+	+		🛨 (market)	×			Budget Office
China	Yes	+			+ (natl bond)	×		×	
Chinese Taipei	Yes	+	+				×	×	
Hong Kong, China	Yes				+ (exch fund)			×	Exchange Fund
Japan	Yes	+				×		×	
Republic of Korea	Yes		+						Priv asst mgmt
Mexico	Yes	+				×	×	×	
New Zealand	Yes	+	+		Res.Bank+Secu			×	
Peru	Yes	+					×		
Philippines	Yes	+					×		
Singapore	Yes	+				×			Acct General
Thailand	Yes				+ (cent bnk)	×			
Russian Fed.	Yes	+				×	×	×	
U.S.A.	Yes	+	+		(inv prog susp)		×		
Viet Nam	Yes	+		+		×	×		

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## Survey Results - 17

53.
Accounting method used in budget units at various levels

54.
Is there a unified Chart of Accounts, aligned with Budget Classification?

55.
DW / FMIS DB provide
effective query tools +
reporting for cash mgmt?

	Accounting	g methods of b	Unified CoA	DW/FMIS DB for	
APEC Economy	Central Level	Regional Level	Local Level	aligned with BC	cash mgmt needs
Chile	Mod Cash	Mod Cash	-	Yes	No
China	Mod Cash	Mod Cash	Mod Cash	Yes	No
Chinese Taipei	Mod Accr	Mod Accr	Mod Accr	Yes	Yes
Hong Kong, China	Cash	Cash	Cash	Yes	Yes
Japan	Cash	Cash	Cash	Yes	No
Republic of Korea	Accrual	Accrual	Accrual	Yes	Yes
Mexico	?	?	?	Yes	No
New Zealand	Accrual	Accrual	Accrual	No	Yes
Peru	Accrual	Accrual	Accrual	Yes	Yes
Philippines	Cash	Cash		Yes	No
Singapore	Cash			Yes	Yes
Thailand	Mod Accr	Mod Accr		Yes	No
Russian Fed.	Mod Accr	Mod Accr	Mod Accr	Yes	Yes
U.S.A.	Mod Cash			Yes	Yes
Viet Nam	Mod Accionksh	nop TK1700 Accr	Mod Accr	Yes	Yes <sup>17</sup>

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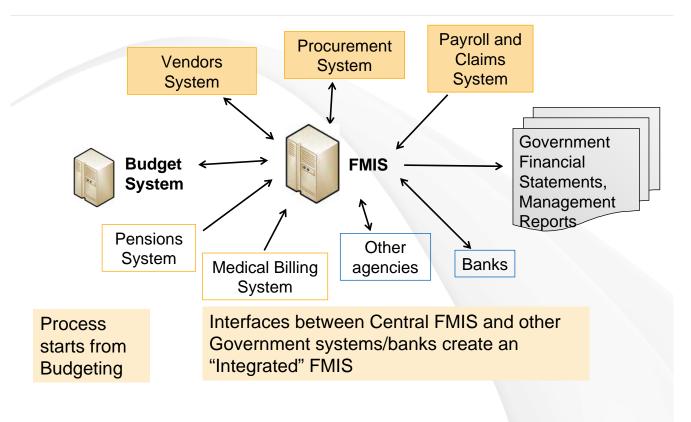
## **Thanks For Your Participation**



## **Agenda**

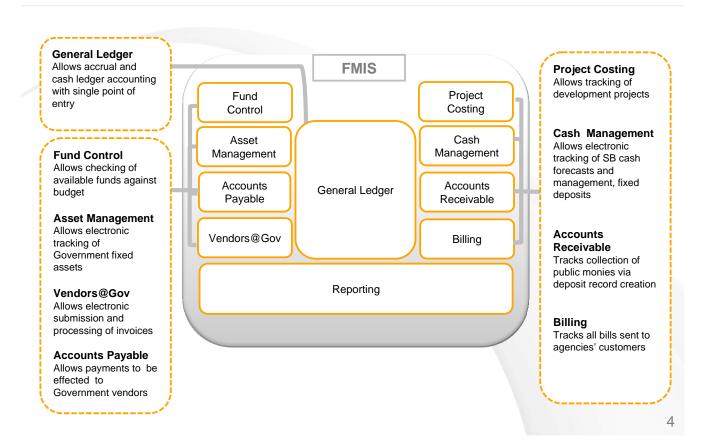
- Overview of Singapore's FMIS
- Raising Productivity & Improving Oversight
- Enhancing Controls
- Supporting Decisions
- Going Forward

## **Overview of Singapore's FMIS**



3

## **Our Central FMIS**

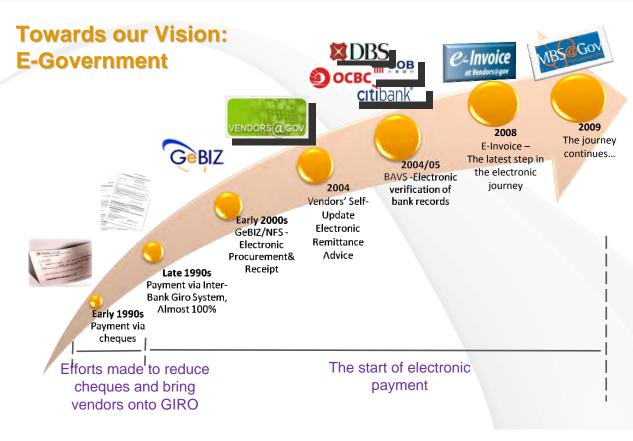


## **Key Design Considerations**

- Computerise processes to raise productivity and reduce need for manual labour
  - Centralisation to improve oversight and efficiency
    - Have robust controls to ensure integrity of records and prevent fraud
      - Provide useful and timely information to support management decisions

5

## **Our Vision: E-Government**



## **Our Vision: E-Government**

## **Towards E-Government: G-B, G-C, G-E, G-G**

Government

#### **Government-Employees**

 Online Payroll and Claims System

#### **Government-Government**

Centralised Liquidity
 Management

#### **Businesses**

#### **Government-Businesses**

- E-invoice
- Vendors@Gov
- Electronic Fund Transfers
- One Stop Procurement Portal
- Medical Billing System

## Citizens

#### **Government-Citizens**

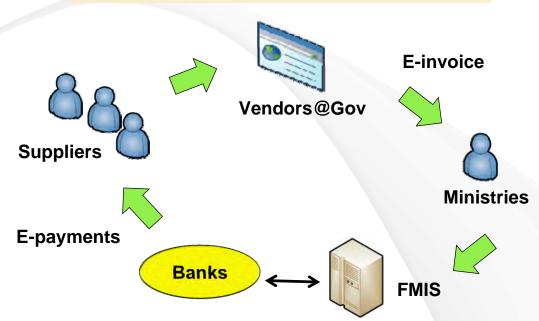
 One Stop E-Payments Portal for Citizens

7

## **G-B: Payment Processes**

Raising Productivity / Improving Oversight

## Whole payment process is done electronically



## G-B: Vendors@Gov & E-Invoice

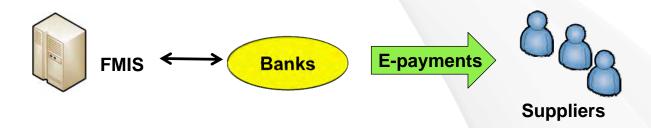
- Vendors@Gov: Online portal for Government suppliers
  - Online creation of supplier record and updating of supplier details
  - Electronic submission of invoices
  - Online tracking of payment status
- E-invoice
  - Eliminate errors from manual input and matching & missing invoices
  - Save on manpower resources
  - Raise IT capabilities of local companies
- Consolidated billing by utility companies
  - Save on manpower resources
  - Faster payment cycle

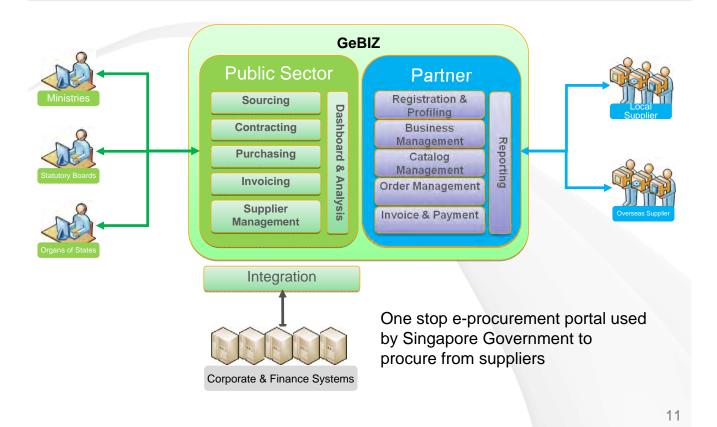


## **G-B: Electronic Payments**

Raising Productivity / Improving Oversight

- Interfaces with banks to promote electronic fund transfers
  - Enhance process effectiveness and efficiency:
    - > Timely payments to vendors
    - Minimal use of cheques
- Consolidate payments to same vendors
  - Reduce processing costs
  - Improve oversight





## **G-B: Medical Billing System**

Raising Productivity

- Medical Billing System introduced to private clinics
  - Clinics automatically claim Government-subsidised portion of medical bill on officer's behalf
  - Government makes consolidated payments to the clinic's bank account
- Benefits derived for:
  - Officers need not pay in full and make claims thereafter
  - Government reduced transaction costs

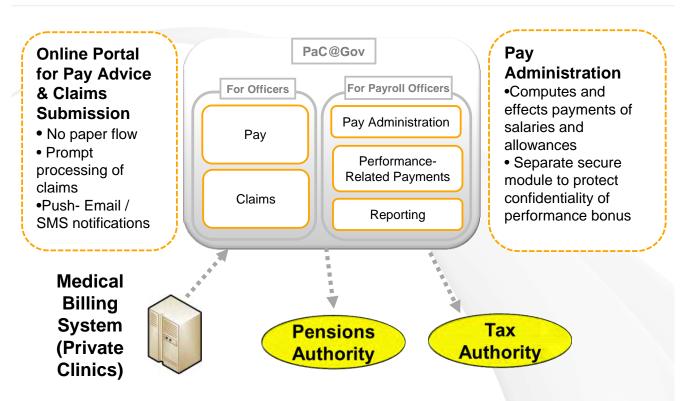


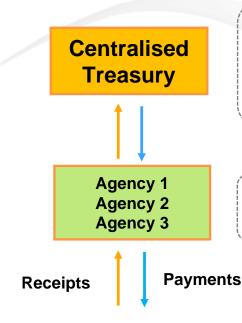
- Collections from citizens are made electronically
  - Timely collections
  - Reduced payment collection costs for Government
  - Greater convenience to the public
- Social transfers and handouts are debited electronically into citizens' accounts



## **G-E: Online Payroll and Claims System**

Raising Productivity





Centralised Management of Government Agencies' Cash for:

- Enhanced efficiency and better returns
- Better visibility of agencies' liquidity
- More timely processing of transactions

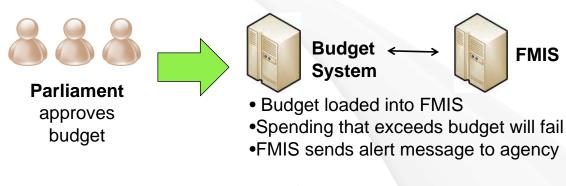
Agencies maintain control over daily payments and receipts

15

## **Budget Control**

**Enhancing Controls** 

- Singapore operates on Balanced Budget
- FMIS prevents overspending by Ministries



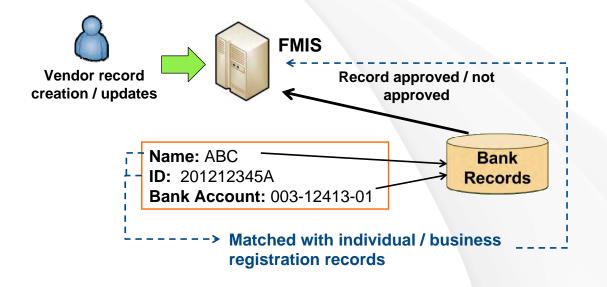
 FMIS sends monthly spending and revenue information to Budget System
 Facilitates monitoring by Budget Team

Total spending per account cannot exceed budget approved in Parliament

## **Bank Account Verification System**

**Enhancing Controls** 

- Electronic check of vendor records against external source for:
  - Better controls Ensure payments are to the right suppliers
  - Enhanced Efficiency Verification of records is automated



## **Useful and Timely Information**

Supporting Decisions

17

- Dual ledger function
  - Able to track cash and full cost (accrual) accounting information
- Spans various modules to support all functions
  - Reports available for all modules, including GL,AR, AP, AM etc
- Real-time reporting
  - Reliable and accurate reports available online at any time of the day
- Flexible, Customisable Reports
  - Available in fixed report formats (e.g. crystal, nvision, sqr)
  - Flexible and customisable queries also available

## **Benefits of FMIS**

Raises productivity

Enables strong controls to ensure integrity

Facilitates management reporting

Improves Oversight

19

## **Going Forward: Data Analytics**

Adding Value

Leverage on repository of data within FMIS and related systems to generate value:

#### Governance

- Detect potential fraud
- Identify high risk areas and design robust controls
- Systematic methodology to constantly review the governance structure

## Management Insights

- Discern patterns & identify trends from data analysis
- Optimise cost savings (e.g. demand aggregation, identify potential bid rigging, etc.)
- Improve process efficiency and effectiveness

#### **Performance**

- Formulate & shape policies
- Predict future trends for better decision making
- Prepare for changes in current trends



## **Thailand Experience with GFMIS**



# Ministry of Finance THAILAND

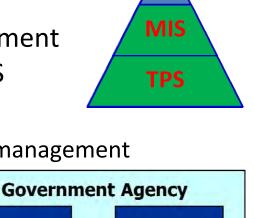
Presented by Boontaree Kositanurit Sudjid Laplertsuk March 26, 2012

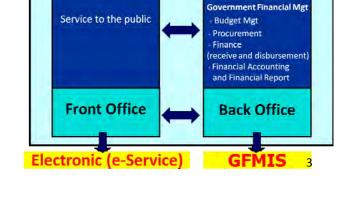
## **Outline**

- What is GFMIS
- History
- System function and architecture
- Current status
- Benefits of the system

## **GFMIS**

- Government Fiscal Management Information System : GFMIS
  - TPS and MIS
  - Central and provincial fiscal management
- e-Government





## **GFMIS**

- Responsible agents : MOF
  - The Comptroller General Department (CGD) for functional work and day-to-day operation
  - Office of the Permanent Secretary (Information and Communication Technology Center) for computer and network system

## **History**

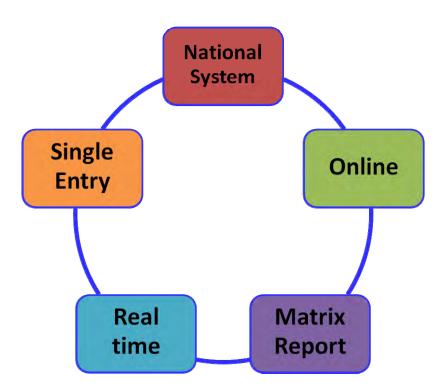
- Why GFMIS?
  - Thai Government Administrative Reform (2002-2004)
  - Increasing transparency for decision making
  - Modernizing Fiscal Management
  - Improving public administration using information technology

## GFMIS

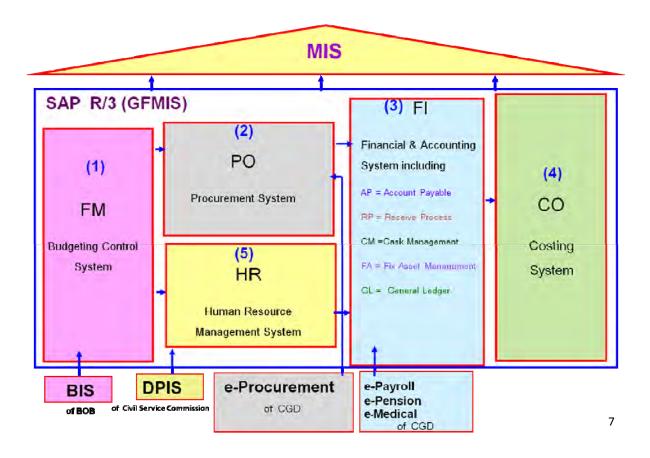
- Starting design and develop on 22 July 2003
- Launching on 1 October 2004 using "Big bang" approach

5

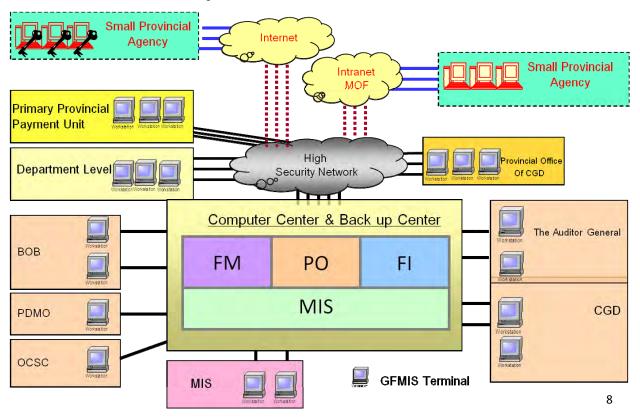
## **Characteristics of GFMIS**



## **System Function and Architecture: Functions of the System**

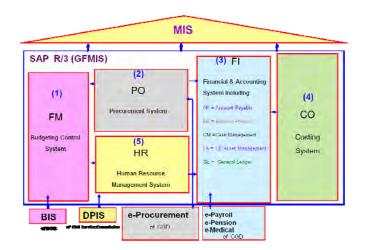


## **System Function and Architecture: Conceptual Network Architecture**



## **Current Status**

- Operate in a fullfledged manner
- Assess to GFMIS available to all government agencies
- Fiscal report compilation faster and more complete
- Link e-GP to GFMIS

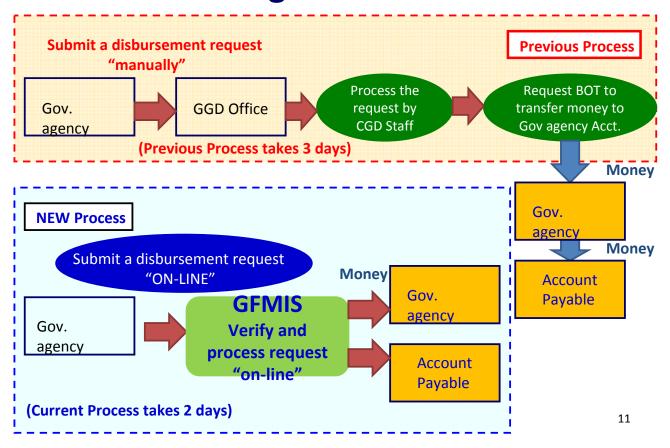


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## **Benefits of the System**

- Day to Day Basis
  - Shorten working process
  - Reducing redundant data entry
  - Accurate payment and no missing check
  - Data enquiry faster and current
  - Generate report automatically
  - Fasten the compilation of consolidated financial statement
  - Reduce resource used
    - Paper
    - Gasoline
    - Staff/Human resource
    - Time

## **Shorten Working Process**



## Benefits of the System

- Being a Strategic tool : Use in
  - Planning and policy making
  - Follow up and evaluate efficiency of fiscal management of government agencies
  - Accelerate national budget reimbursement efficiently

# THANK YOU CПАСИБО

# 二、 財務管理資訊 系統之發展

# Development of China's Fiscal Treasury System

Lulu Chen

chenlulu@mof.gov.cn Department of Treasury

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## **OUTLINE**

Part One: Current development of China's treasury system

Part Two: Plan for the future Reform

# Part One: Current development of China's treasury system

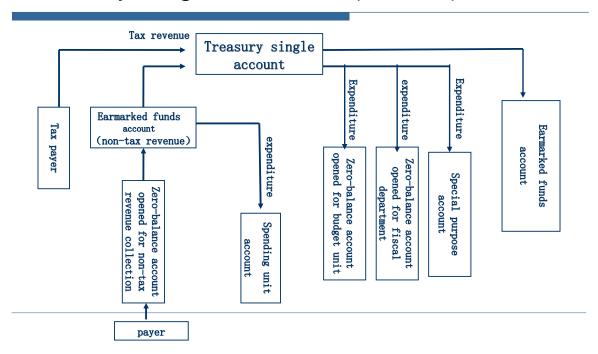
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# 1. Budget implementation management

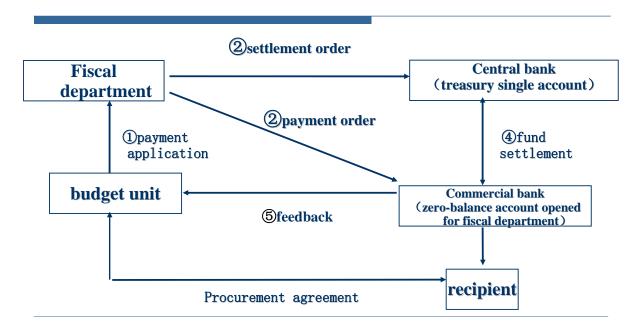
- a. treasury single accounts system.
- ☐ In 2001, China established the treasury single accounts system.
- ☐ Treasury single accounts (chart1)
- ☐ Centralized treasury payment includes treasury direct payment (chart2) and treasury authorized payment(chart3).
- ☐ In respect of treasury centralized revenue collection, this mechanism applies to both the tax collection and non-tax revenue collection.

## Treasury single accounts (chart 1)

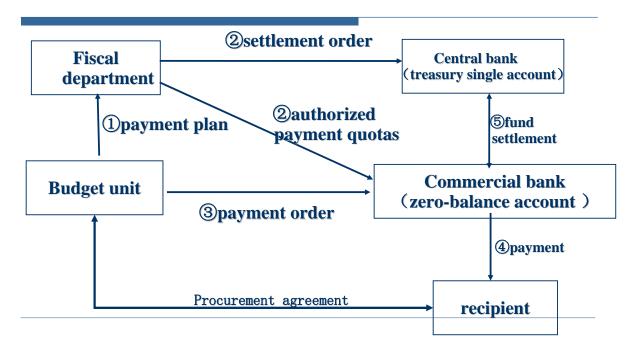




## Treasury direct payment (chart 2)



## Treasury authorized payment (chart 3)





# 1. Budget implementation management

- b. Budget implementation real-time monitoring mechanism.
- □ With the implementation of centralized treasury payment and revenue collection reform, China established electronic monitoring system based on the treasury single account.

## I . Budget implementation management

#### c. Budget implementation report system.

statements and relevant analysis.
components, the budget implementation
statements from various levels, which mainly has two
consisting of treasury statements and budget
Budget implementation report is a aggregate report

9



# I . Budget implementation management

#### d. Final account system.

- ☐ Final account system includes fiscal final account system and departmental final account.
- ☐ Fiscal final accounts are made up of central government fiscal final account and local government fiscal final accounts.
- Department final account refers to accounting statement of annual budget implementation from all departments.

# I . Budget implementation management

e. Fiscal statistics system.
------------------------------

- ☐ It explains the difference of relevant published fiscal statistics data and regulates these data gradually.
- ☐ It publishes fiscal budget data regularly through MOF website, China Statistics Year Book, China Fiscal Year Book.
- ☐ It compiles the historical fiscal data, makes use of these data and prepares statistics data analysis report.
- ☐ It is also responsible for providing fiscal statistics data to IMF.

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# II. China government debt management

## II. China government debt management

On government debt management, China established
the debt balance management system in 2006.

- ☐ Since the implementation of the pro-active fiscal policy from the latter part of 2008, 5 trillion RMB government bond in total has been issued.
- ☐ The government bonds include savings bonds and book-entry bonds, with maturities ranging from 3 months to 50 years.

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## **III. Treasury Cash management**

## III. Treasury Cash management.

- □ In year 2005, the state council approved the conduction of treasury cash management. In June 2006, MOF issued two policies in coordination with People's Bank of China.
- One is the Tentative Measures on Central government treasury cash management, and another one is the Operational regulation on commercial bank time deposits in the central government cash management.

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# IV. Treasury Management Information System (TMIS)

## IV. TMIS

- ☐ In 2000, China began to design government fiscal management information system (GFMIS).
- ☐ At the beginning of 2001, China started to construct Treasury Management Information System (TIMS).
- ☐ After more than 10 years of hard work, China has constructed comparatively complete TMIS and according large-scale electronic network.



## IV. TMIS

- ☐ Chinese TMIS functional framework mainly include 9 sub-systems:
- ☐ 1.Authorization system
- □ 2.Payment system
- □ 3.Government Procurement system
- ☐ 4.Wages system
- ☐ 5.Revenue system



- ☐ 6.National bond system
- ☐ 7.Cash management system
- □ 8.General ledger
- ☐ 9.Fiscal analysis system



Part Two: Plan for the future Reform

# I. Budget implementation Management Reform

To Further refining the treasury single accounts system reform.
To further improving the real-time monitoring system for budget implementation.
To expand the depth and scope of budget implementation report.
To further improve final account system.
To further improve fiscal statistic system.



# II. To further improve government debt management

We will make great effort to push forward government
debt management innovation and to continuously
strengthen the government bond market operation
mechanism.

#### III.To further improve Treasury cash management

<ul> <li>Research will be conducted to establish treasury cash management accounts and regulations on target level management.</li> <li>Increase the operation scale and frequency gradually and establish standardized operation mechanism for central government treasury cash management.</li> <li>The financing and investing tools for treasury cash management will be enriched.</li> <li>Steady push forward local government treasury cash management .</li> </ul>	
<ul> <li>establish standardized operation mechanism for central government treasury cash management.</li> <li>The financing and investing tools for treasury cash management will be enriched.</li> <li>Steady push forward local government treasury cash</li> </ul>	management accounts and regulations on target level
management will be enriched.  ☐ Steady push forward local government treasury cash	establish standardized operation mechanism for central



# IV. To further improve TMIS



# Thank you



SI-O

# Ministry of Strategy and Finance Republic of Korea

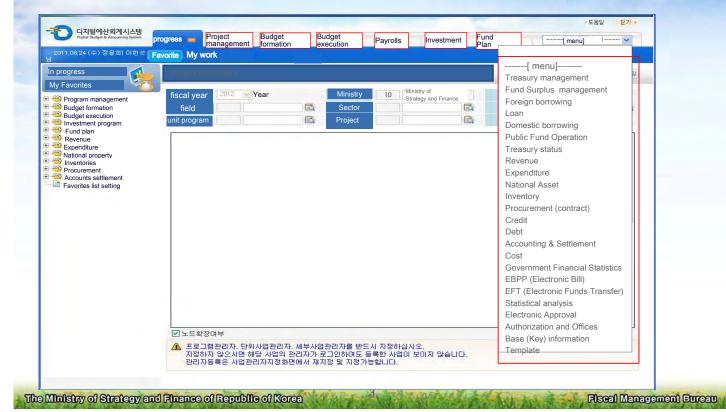
The Ministry of Strategy and Finance of Republic of Korea

Fiscal Management Bureau



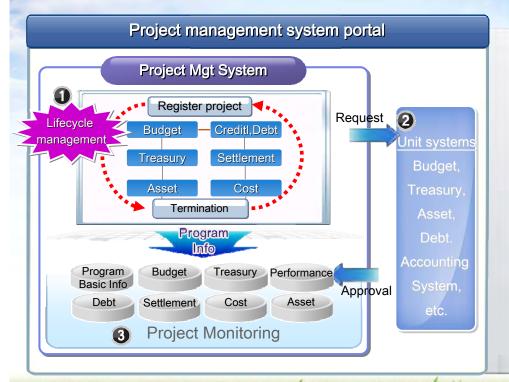
#### 1. Web-Portal

#### [To Do] -> Access to each Unit system





Manage Life-Cycle of fiscal project from register, formation, allocation, expenditure, management of its assets and debts, to termination of the project

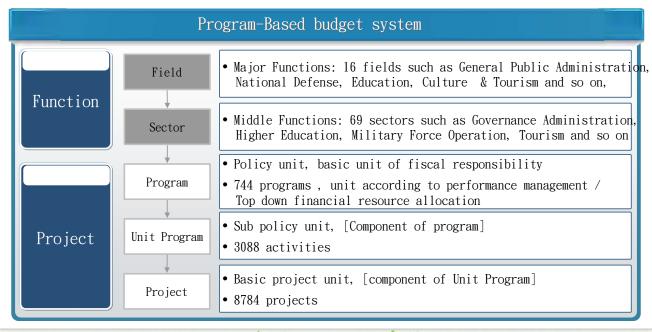


- Management of registration, operation and termination of Projects
- Manage Projects
  - -Investment Plan
  - -Budget Formation and Execution
  - -Asset management
  - -Accounting and Settlement
- Monitoring Program Information

### 2. Project Management

#### 1. Structure of Project Management

'Project Management' classifies projects according to the program-based budget system.

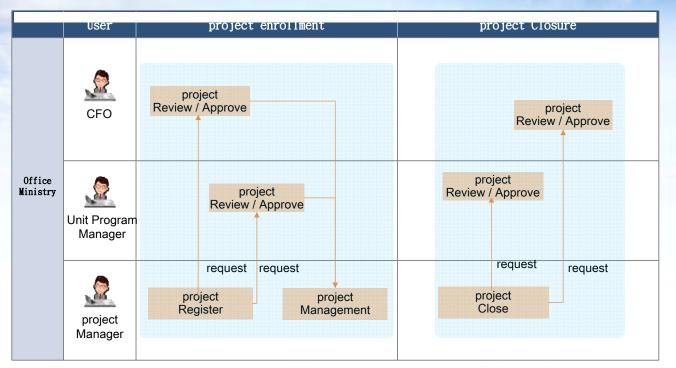


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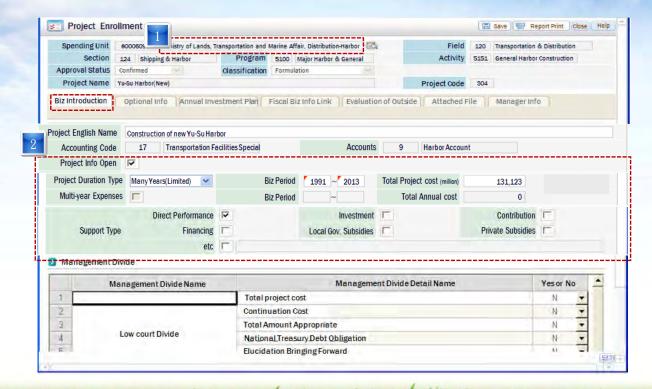
### 2. Project Management

#### 2. Project enrollment and closure



## 2. Project Management

#### 2-1. Project enrollment (screen shot)

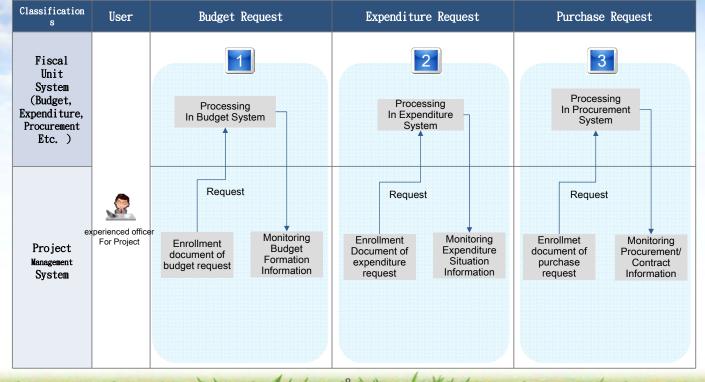


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Fiscal Management Bureau

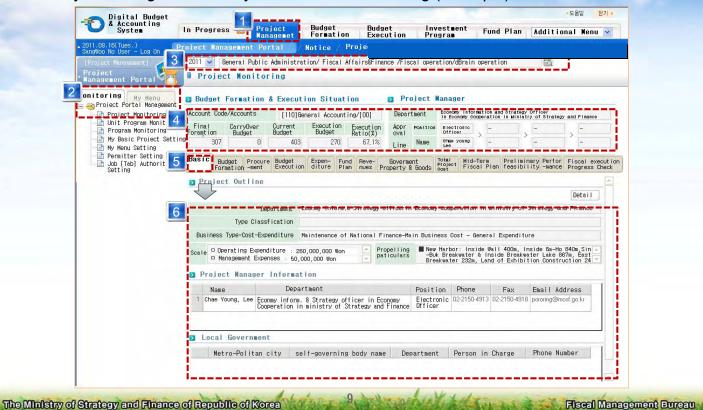
## 2. Project Management

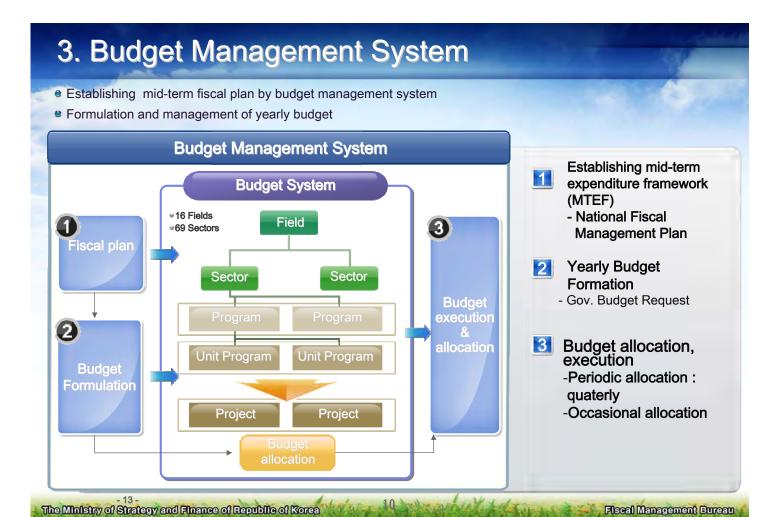
#### 2. Project Management System



#### 2. Project Management

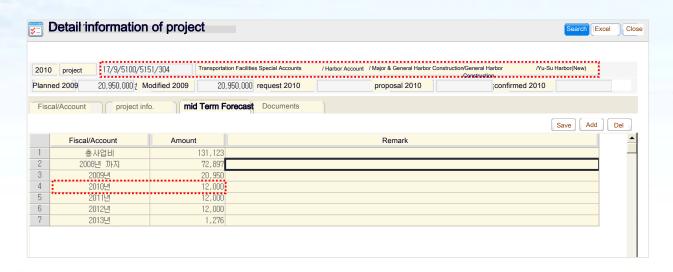
3. Project Management - Project Basic Info Monitoring (Example)





## 3. Budget Management System

- Line ministry can make a plan for annual budget formation within its ceiling which is decided on the basis of the scheduled amount for midterm fiscal plan.
- The ceiling of budget information which is a part of midterm fiscal plan is used for reference when requesting the annual budget.

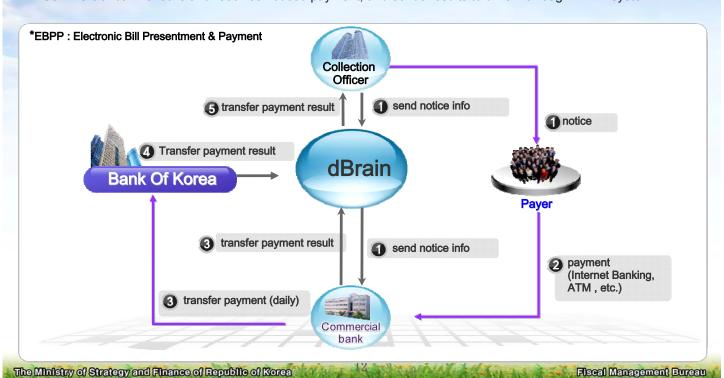


The Ministry of Strategy and Finance of Republic of Korea

Fiscal Management Bureau

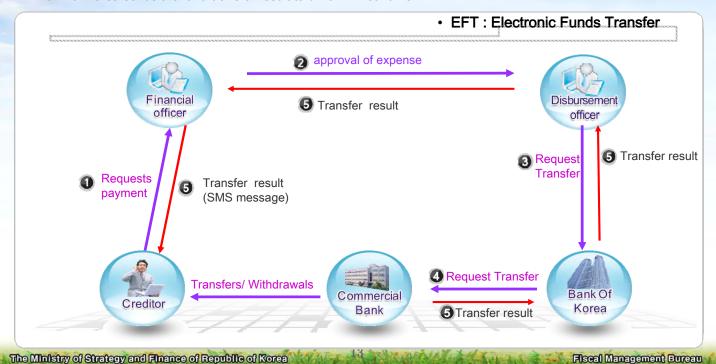
#### 4.Revenue/EBPP

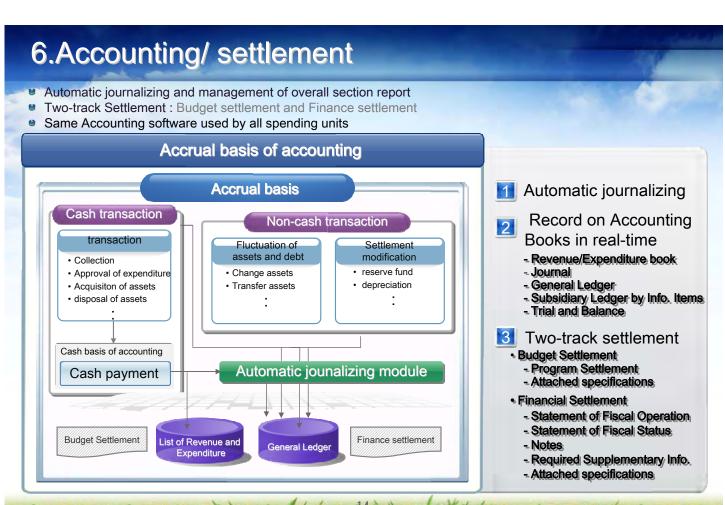
- Collecting agency notifies payer, and transfers summary information of notice to dBrain system.
- Payer pays tax by Internet Banking or visiting banks, etc.
- Commercial bank checks and receives noticed payment, and sends results to dBrain through EBPP system



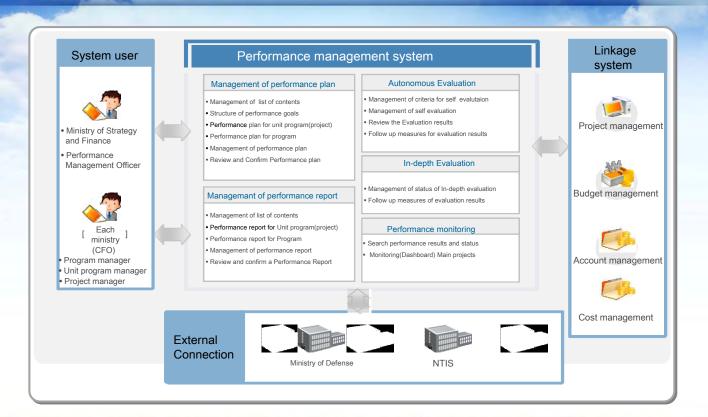
### 5. Payment / EFT

- Creditor requests payment for service or goods by internet
- Government internally approves the expense, and demands the Bank of Korea to transfer funds to creditor's account
- Bank of Korea sends the fund-transfer result to dBrain in real-time





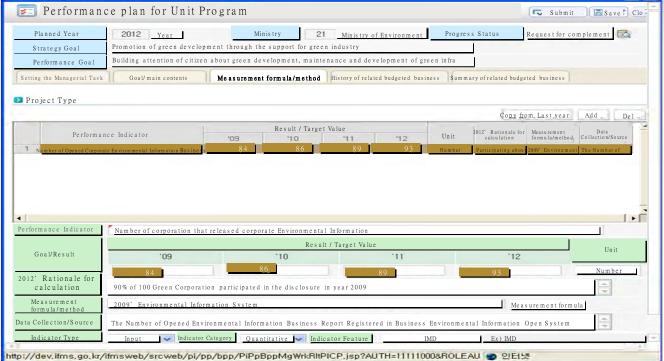
## 7. Performance Mgmt System

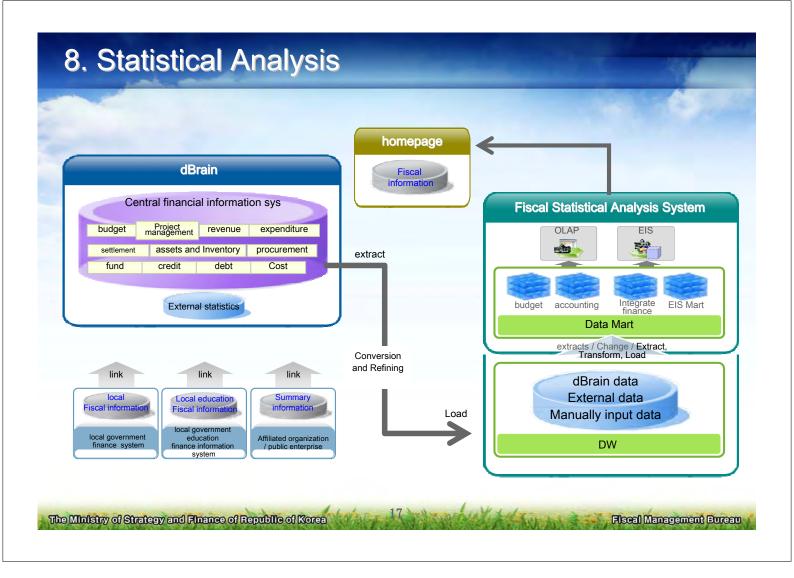


The Ministry of Strategy and Finance of Republic of Korea

Fiscal Management Bureau

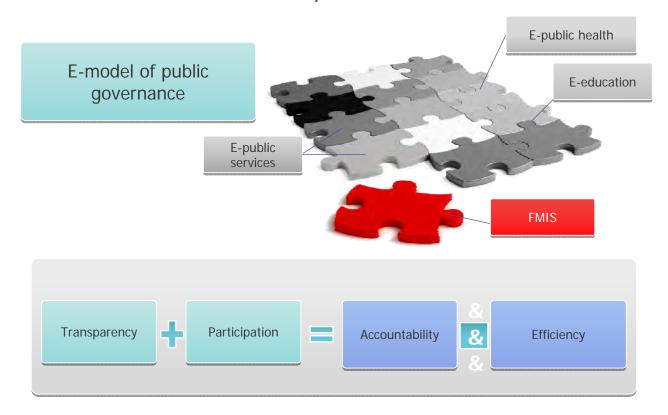


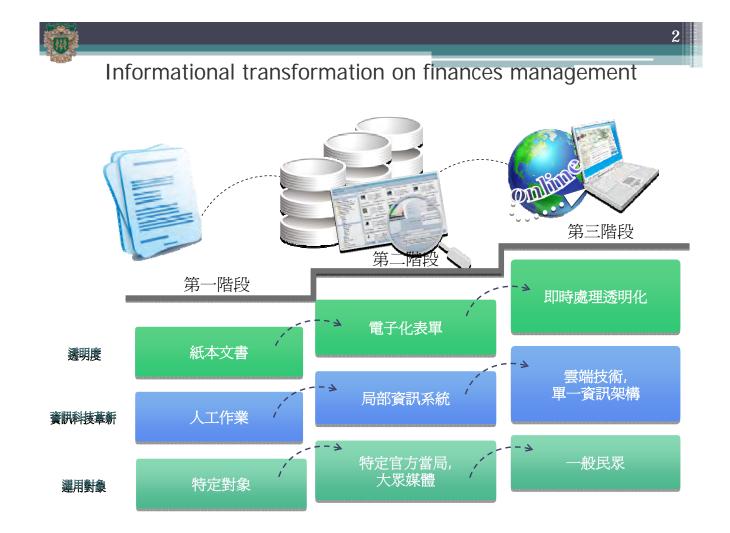






#### FMIS as a part of E-State







#### Trends in FMIS system design

Economic event

1

To dematerialize information bearers

To ensure single registers and classifiers application

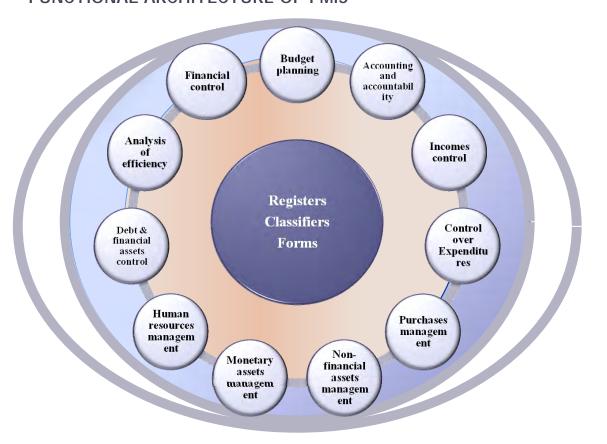
To provide single data input

To implement standards for business processes

To ensure 24-hour e-database access

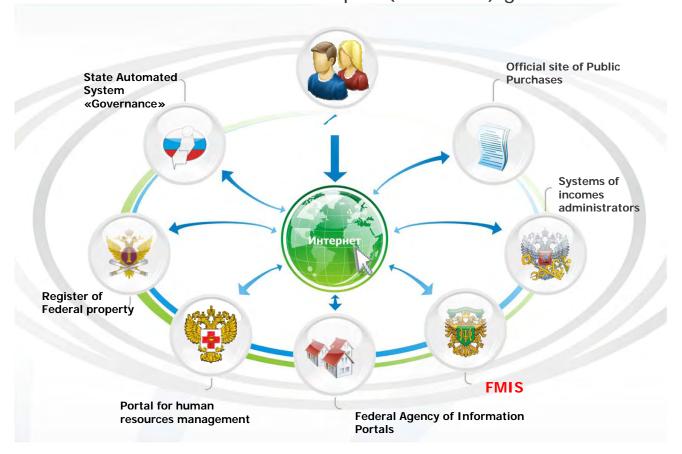
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#### FUNCTIONAL ARCHITECTURE OF FMIS





#### Information environment of open (electronic) government

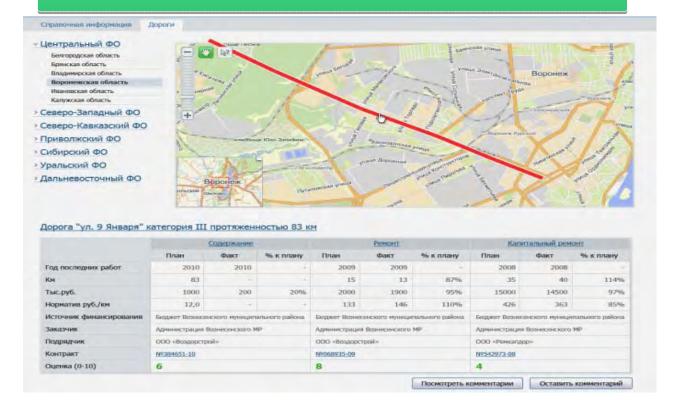




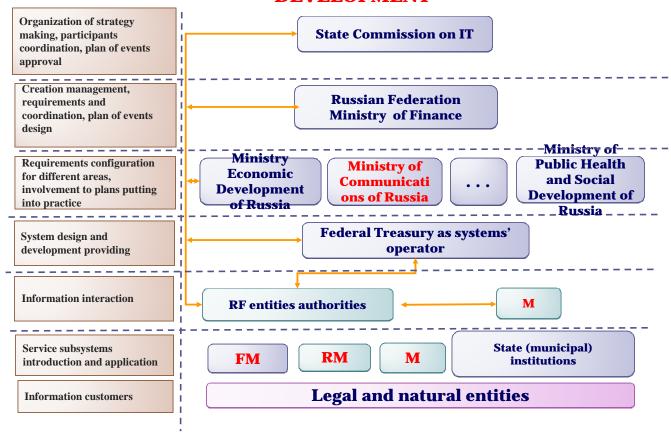
6

#### Transparency and involvement

#### United portal of Russian Federation budget system www.budget.gov.ru



## GOVERNANCE ORGANIZATION BY MEANS OF CREATION AND DEVELOPMENT





8

# Roadmap for the FMIS system as for the years 2012-2015



- for the year 2012
- Transfer to the united registers and classifiers
- Approbate the first subsystems for the "FMIS" system



#### for the year 2013

Create the United (single) portal for the budget system <u>www.budget.gov.ru</u>



#### for the year 2014

Shift to book-keeping within "FMIS" system



#### for the year 2015

- Project's all-inclusive implementation on the federal level
- Service providing for the Russian Federation entities and local administration agencies

#### EFFECTS OF FMIS" SYSTEM CREATION

- achieving of not less than 70 points value on public finances information transparency index (Open Budget Index)
- bring legally relevant e-documents flow share in an overall volume of documents flow in the FAF federal organizations of public governance sector to not less than 70 percent
- •30 percent cut down of the time for financial and management documents processing at the federal organizations of public governance sector
- terms cut down for formation of any kind of financial and management reporting of federal organizations in the sector of public governance in 1.5 times
- Bringing information share placed at the united portal of the Russian Federation budget system (www.budget.gov.ru) in real-time to come up to 100%
- Making the "FMIS" system accessible to all the Russian Federation subjects and for not less than 50% of municipal entities of the Russian Federation



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#### Operational efficiency of FMIS



# TIME ADVANTAGES IN INFORMATION EXCHANGE BETWEEN THE ORGANIZATIONS

- Automatic generation of administrative and accounting documents
- Improvement of documents handling (classifying, search...)
- Time reduction for reports preparation
- Joint access to the stored primary documents



#### INFORMATION QUALITY UPGRADING

- Operations simplifying
- Information is entered once (input errors essentially decrease)
- Real-time information record and traceability
- Greater security at documents exchange



#### FINANCIAL ADVANTAGES

- Paper saving
- Accountancy staff cut down
- Expenses saving as for printing, filing, storing...

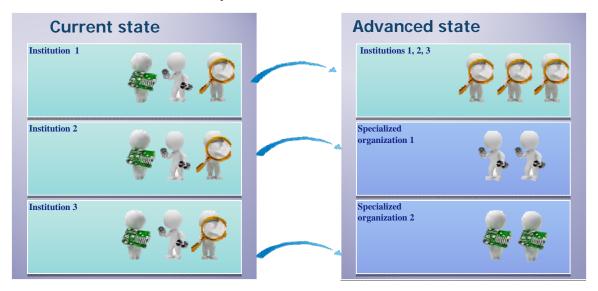


#### PROCEDURES HARMONIZATION AND AUTOMATION

- Automation of particular kinds of control
- Data exchange formats harmonization
- Simplifying primary documents nomenclature
- Cutting the terms for payments processing and carrying out



### Specialization



Specialization trends

Accounting

Human resources management

**Purchases** 

Construction

# 三、現金管理







# Cash Management Practices in APEC Economies

Presentation by: Ian Storkey

March 27, 2012



Advancing Free Trade

APEC Workshop hosted by the Federal Treasury and the Ministry of Finance of the Russian Federation with the participation of the World Bank and APEC Secretariat Kazan, Russian Federation, March 25-27, 2012

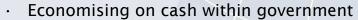
# Two Key Questions

- 1. What are the key elements of effective cash management?
- 2. What are sound international practices, and the experiences in APEC economies?

# Objectives of Cash Management

# **Overriding Objective:** Ensuring Cash is Available to Meet Commitments

Other Objectives: must be subject to overriding objective



- saving costs and reducing risk
- to borrow only when needed
- Managing efficiently the government's aggregate short-term cash flows
  - both cash deficits and cash surpluses
  - maximize returns on idle cash
- · In such as way as to also benefit
  - debt management
  - monetary policy
  - financial markets (market liquidity and infrastructure)

# Approaches to Cash Management

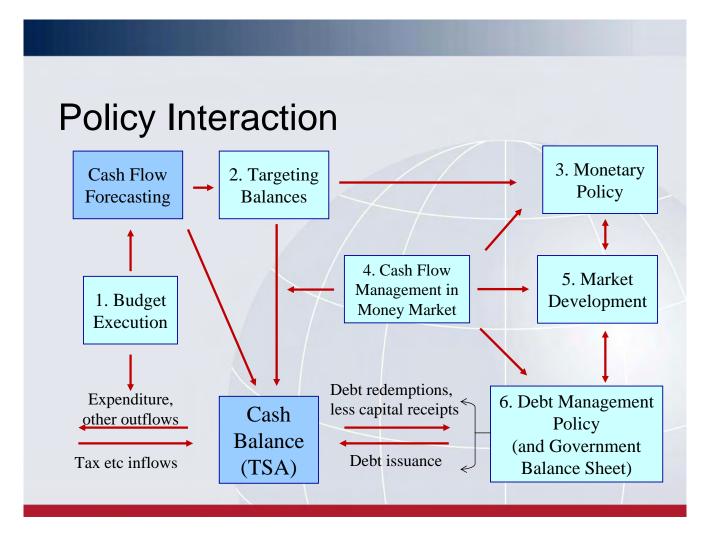
#### Traditional (Passive) Approach

- Essentially passive
- Monitoring cash balances, maintaining cash buffer to handle both volatility and unanticipated outflows
- If necessary restraining / slowing expenditures or delaying bill payments - cash "rationing" is not cash management

#### **Modern (Active) Approach**

- · Managing cash more actively
- Trying to smooth weekly or daily cash flow by more active borrowing and lending in money market
- Allows lower average cash buffer - with benefits to other policies
- Gives tools to protect expenditure plans from cash flow volatility

OECD, middle-income countries (especially in Europe), and some APEC countries are moving toward a more active approach



# Cash Management Definitions

"Having the
right money
in the
right place
at the
right time
to meet government's
obligations in the most
cost-effective way"

"The strategy and associated processes for managing costeffectively the government's short-term cash flows and cash balances, both within government, and between government and other sectors"

# Two Key Public Policy Objectives

#### **Fiscal**

To ensure that line ministries or departments and government agencies manage their cash balances effectively so that the government does not have "surplus" cash on hand

#### **Monetary**

To neutralize the impact on the domestic banking sector of the government's cash flows, ensuring that:

- there are no large and unpredictable changes in liquidity in the banking system
- monetary policy is not undermined

# Public Financial Management (PFM)

- At the heart of PFM reform of government cash management is:
  - An efficient government budget and accounting system (i.e. FMIS)
  - Medium Term Fiscal and Expenditure
     Framework (MTFF/MTEF) with sound policies
     and procedures for accurate and timely:
    - · monitoring and controlling government expenditure
    - · forecasting government revenue
  - Treasury Single Account (TSA)

# Budget Control v Cash Management

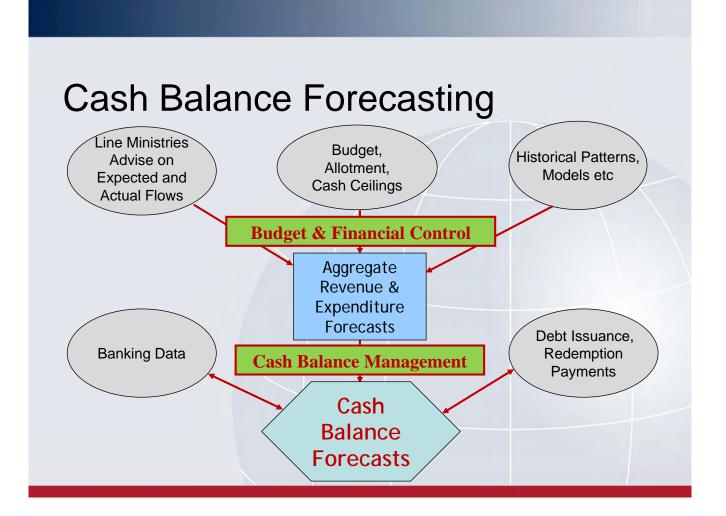
#### **Budget & Financial Control**

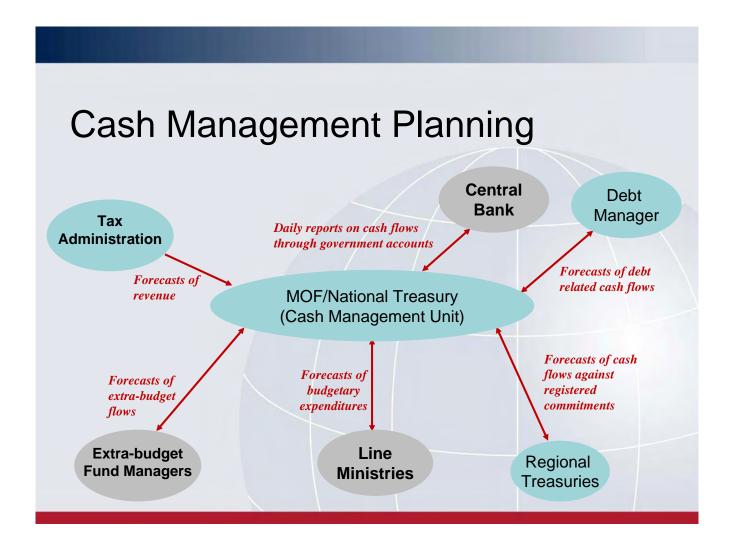
- Revenue and expenditure budgeting
- Control against budget appropriation and warrants
- Comptrollership or financial control over payments and receipts
- Government accounting
- · Financial reporting

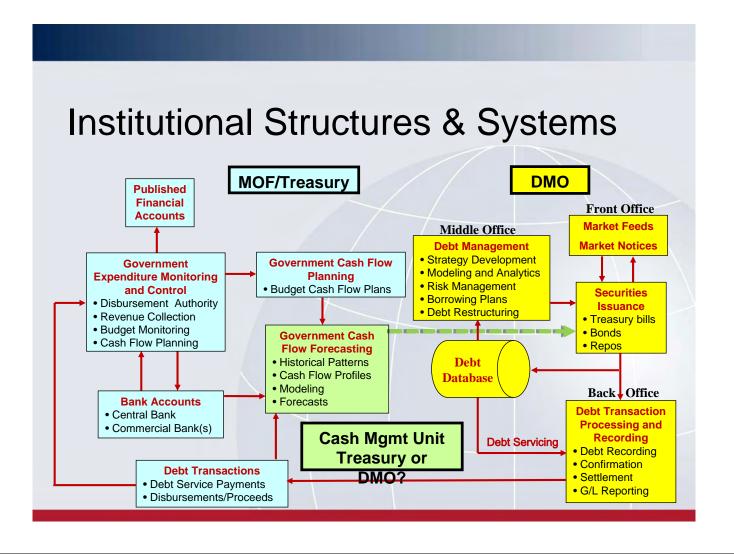
--FMIS--

#### **Cash Balance Management**

- · Cash flow forecasting
- Maintenance of bank accounts and relationships
- Efficient and timely processing of payments and receipts
- Management of government float and working capital
- Minimization of transaction and interest costs

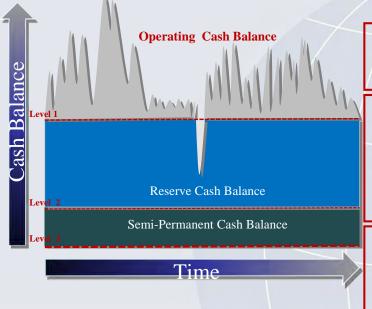






## Cash Balance Sub-Portfolios

Allocating cash into 2-3 tiers of sub-portfolios according to different liquidity needs



- Balance changes frequently
- Actual balance more likely to vary from projection
- Liquidity is primary concern
- Shorter investment horizon (overnight)
- Balance rarely changes
- Serves as a buffer in case actual operating cash balance differ from projection
- Possibility to seek higher returns by extending investment horizon (overnight/monthly)
- With reliable cash-flow forecasting and shortterm funding sources, this tier of cash balance could be reduced or eliminated to reduce debt
- No foreseeable need for liquidation
- Suitable for seeking higher returns by extending investment horizon (monthly/short-term bond index)
- Examine if this tier of cash balance is really needed; when financing cost exceeds investment returns, it may be more advantageous to repay debt

# Cash Balance Targets

- On a survey of 22 OECD countries, 16 maintain a target cash balance
- Types of target are diverse
  - Minimum floor
  - Maximum ceiling
  - Different objectives and incentives
- Target cash balance level depends on
  - Fiscal position and its long-term trend
  - Source of cash balance (e.g. if it is debt-funded)
  - Accuracy of cash flow forecasts
  - Short-term funding availability (and reliability)
  - Cost of carry (the difference between investment return and funding cost)
  - Risk tolerance

# Examples from APEC Economies

Australia

A\$750mn ± A\$250mn

USA LIGOS

US\$5bn (US\$7bn when there is high tax volatility)

# Features of the More Advanced Countries across the APEC Region

- 1. Centralization of government cash balances and establishment of a TSA structure
- 2. Clear understanding on the coverage of the cash planning framework
- 3. Ability to make accurate projections of short-term cash inflows and outflows
- 4. An adequate transaction processing and accounting framework
- 5. Timely information sharing between the central Treasury, revenue-collecting agencies, spending ministries and/or Treasury branch offices
- 6. Appropriate institutional arrangements and responsibilities
- 7. Utilization of modern banking, payment and settlement systems
- 8. Use of short-term financial market instruments for cash management
- 9. Integration of debt and cash management

#### Best Examples from APEC Economies

Australia
Canada
Japan
New Zealand
Singapore
USA

# Features of the Less Advanced Countries across the APEC Region

- 1. Banking system is underdeveloped or underutilized
- 2. Payments are made in checks and/or banknotes
- 3. Multiple government bank accounts exist
- 4. Daily balances in all government accounts are unknown
- 5. Unnecessary borrowing occurs
- 6. Cash flow forecasts are not prepared
- 7. "Cash management" is mainly about expenditure control
- 8. Expenditure arrears have arisen
- 9. IT systems are underdeveloped
- 10. Lack of personnel with skills for modern cash management and understanding of importance of cash planning
- 11. Revenue collection remunerated through days at which resources are maintained deposited in the banks
- 12. Non-transparent or inadequately remunerated services provided by the Central Bank
- 13. Central Bank manages government liquidity (invests, etc.) and not the Treasury
- 14. Deposits at the Central Bank are not remunerated

PFM Cash Management Reform

**Programs** 

P R China Indonesia

Mexico

Peru

Philippines

Viet Nam

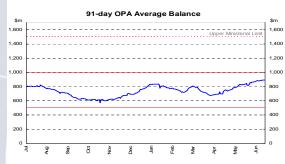
## APEC Country Example: Australia

- Primary cash management objective:
  - "ensure the Australian Government has sufficient funds to pay its payment obligations as and when they fall due"
- Reserve Bank of Australia (RBA) manages net position in OPA (TSA)
- Transaction processing through RBA and commercial banks where necessary
  - · Bank accounts:
  - · administered receipts
  - · administered payments
  - · departmental receipts and payments
  - Sweeping of commercial bank accounts to the OPA each night
  - Australian Office of Financial Management (AOFM) responsible for cash balance forecasting & management

- AOFM's cash management operations:
  - forecasting the OPA cash balance at the Reserve Bank of Australia on a daily basis
  - when the OPA cash balance is forecast to be negative issuing short-term debt securities (Treasury notes) to fund the expected shortfall
  - investing excess OPA cash balances
- RBA provides Federal Government:
  - banking services-the aggregate OPA balance or daily cash position
  - short-term investment facilities (overnight deposits and term deposits)
  - overdraft facility
- Department of Finance & Deregulation manages transfers to departmental and agency bank accounts using the Cash and Appropriation Management System (CAMM)
  - AOFM receives information for forecasting end-of-day balances

# APEC Country Example: Australia

- Official Public Account average balance:
  - Ministerial (Policy) Limit: Rolling
     91-day average balance less than
     A\$1,500mn
  - Operational Limit: 91-day average upper limit A\$1,000mn, lower limit A\$500mn - therefore, central target of A\$750mn
- A\$750mn is considered an appropriate "liquidity buffer" to allow for volatility in revenue and expenditure
- Interest is paid on OPA balances at the Reserve Bank of Australia at the Overnight Cash Rate



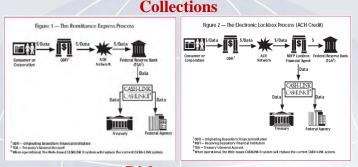
Source: Australian Office of Financial Management

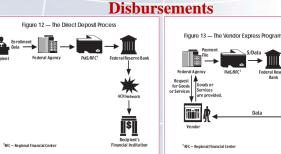
# APEC Country Example: USA

- · Purpose of cash management
  - to eliminate idle cash balances
  - to deposit collections timely
  - to properly time disbursements
- Federal Reserve Bank (FRB) of NY manages net position in TSA
- Transaction processing through FRB of NY, other FRBs, and commercial banks where necessary
- · Interest incentives and penalties
  - An automated system called CASH TRACK is used to help monitor cash movements

Information is also captured daily from the CA\$H-LINK system

Details are available in Cash Management Made Easy







# APEC Country Example: China

- Reform of cash management started in 2000 at both central and local government levels, although progress has been slow particularly across local governments
  - MoF and PBoC issued the "Pilot Programs of Treasury Management System Reform" with approval of the State Council in 2001, which proposed to establish a treasury management system based on TSA
  - By the end of 2009, 36 provinces, special municipalities and separate planning cities together with more than 320 cities and 2100 counties, and over 310,000 primary budgetary units have implemented Treasury Centralized Receipts and Payments System reform and established a TSA
- · Challenges continue with the need to strengthen
  - Budget management
  - Cash flow forecasting
  - Management of cash flows and balances including debt and investments
  - Clarity of responsibilities between government and central bank (PBoC)

## **APEC Country Example: Mexico**

- Reform of cash management is with the Federal Treasury (Tesorería de la Federación or TESOFE)
- · TSA in place, but short of international sound practice
- Program for further reform of cash management began in 2010 with help from IMF
  - Review of the Treasury Law and supporting regulations
  - Expand coverage of the TSA
  - Improve cash flow forecasting
  - Set an optimal target cash balance
  - Move towards more active management of cash flows
  - Move to more closely align cash and debt management
  - Develop operational risk management framework including a business continuity and disaster recovery plan
  - Make greater use of electronic payments and collections

# APEC Country Example: Peru

- Reform of cash management is with Dirección General de Endeudamiento y Tesoro Público (DGETP)
  - Merger of Treasury and Debt Management in 2011
- Modern Treasury Systems Law since 2006
- TSA well developed since introduced in 2008
  - Over 80% of budget flows through TSA
- Project for further reform of cash management established in
   2011 with help from IMF
  - Decision making committees to be introduced
  - Review of the Treasury System Law and supporting regulations
  - Improve cash flow forecasting
  - Set a minimum cash flow buffer
  - Move towards more active management of cash flows
  - Formulate the structure between DGETP and central bank

PFM Cash
Management
Reform process
is similar in
other countries
to Mexico and
Peru under IMF
reform

nrograms





27 March 2012

Joanne Ling
Director-General
National Treasury Agency
Ministry of Finance



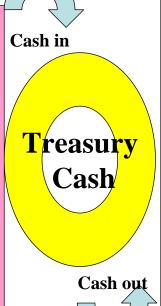
- The financial structure
- The objectives of cash management
- Effective government cash management
  - Management of cash receipts & payments
  - Cash flow forecasting
  - Management of government cash balance
  - Matching debt management
  - Matching monetary policy
- Perspective



#### The sources of cash flow in and out

#### **Gross Revenues**

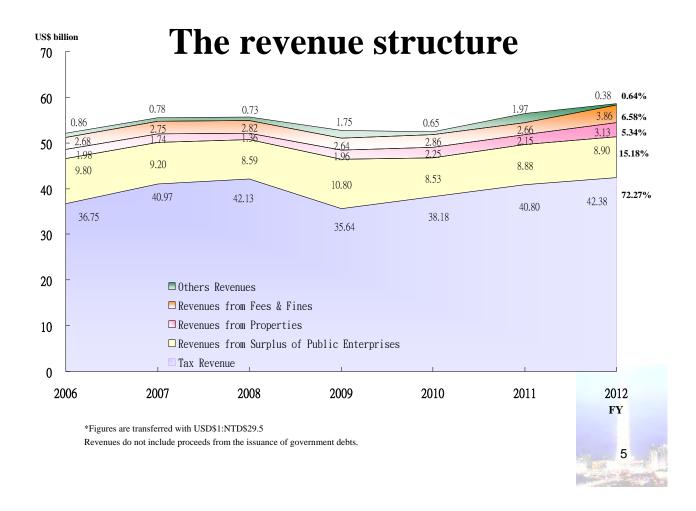
- Tax revenues
- Revenues from surplus of public enterprises
- Revenues from properties
- Revenues from fees & fines
- Other revenues
- Proceeds from the issuance of government debts

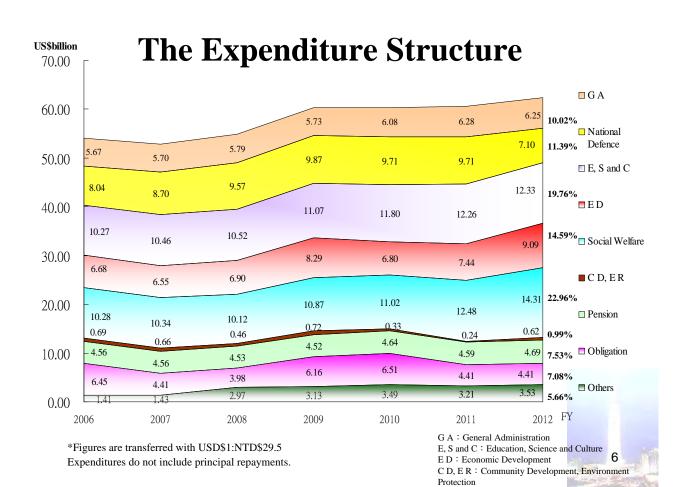


#### **Gross Expenditures**

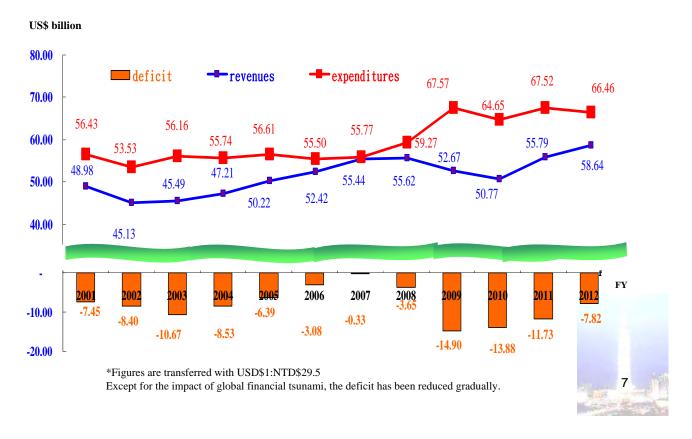
- General administration
- National defense
- Education, science and culture
- Economic development
- Social welfare
- Community development & environment protection
- Pension
- Other expenditures
- Obligations

1

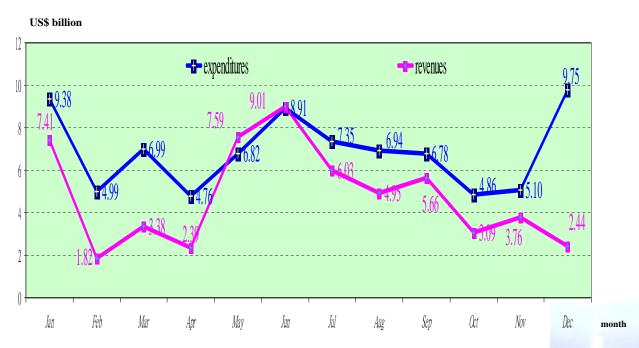




#### The trends of revenues and expenditures

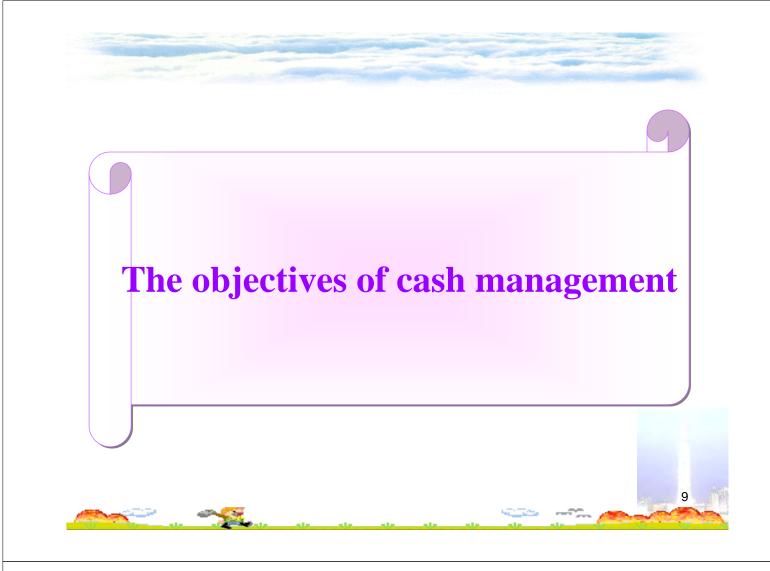


#### The cash flow per month in 2011



The effective cash management could alleviate the inconsistent between receipts and expenditures.

\*Figures are transferred with USD\$1:NTD\$29.5



#### Why is cash management important

- Cash management is having the right amount of money in the right place at the right time to meet the government's obligations in the most cost-efficient way with manageable risk
- The good cash management enable to plan and coordinate the monetary policy operations and cash funding activity
- The poor cash management is unable to accurately project future cash flow, which causes government maintain a large amount of idle cash balance

#### The objectives of cash management

#### Major objectives

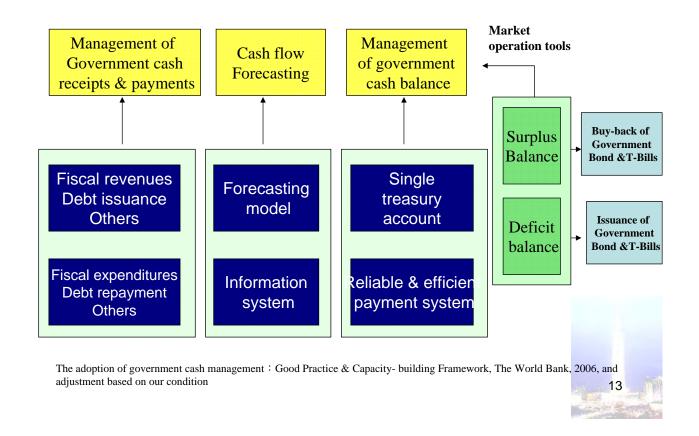
- Ensuring that adequate cash is available to pay for expenditures when they are due
- Ensuring excess cash holdings are minimized

#### secondary objectives

- Matching debt management: Issue government bonds and treasury bills regularly
- Matching monetary policy

Effective government cash management

#### **Effective government cash management(2)**



Management of cash receipts & payments

#### **Architecture of cash management**

#### •The use of the treasury information system in MOF

Avoid mistakes due to human error through

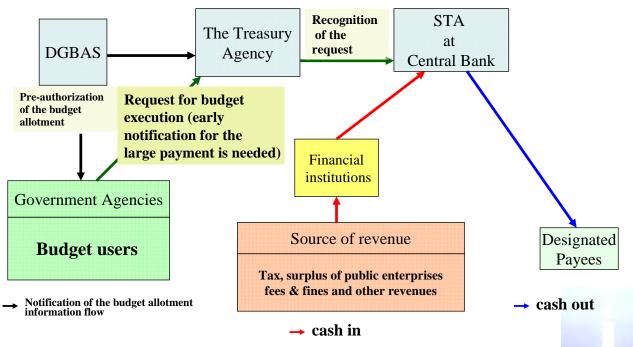
- manage the government cash balance and the position of receipts and payments daily
- Adopt adequate financial plans

#### •The single account in Central Bank

- On the basis of centralized revenues/expenditures and exception of special saving/management accounts
- On the basis of direct submission to the treasury account
- On the basis of centralized expenditures



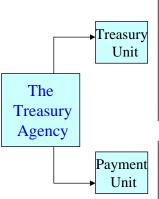
#### The cash management model of Chinese Taipei



DGBAS: Directorate-General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan, a cabinet-level office, handles most of the duties of the nation's Comptroller's Office and Census Bureau combined. DGBAS is the authority to distribute public resources.

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#### Function of the treasury system



- •Planning of public treasury system
- •Supervision of treasury operation.
- •Management of treasury single account.
- •forecast of receipts/payments/account
- •Management of government public debt
- •Management of information system

#### • Budget Control and Expenditure Payment

Using centralized information system to manage the disbursement to all central government agencies and keep budget information accurate and consistent

•Issuance of Treasury Funds

According to the "payment documents" issued by each agency, the funds for the expenditure of government agencies shall be paid by check or by bank remittance

Central Bank

#### •Managing the Treasury Deposit Account (TDA)

Managing the TDA of the Central Government by delegating other financial institutions processing receipts/disbursements

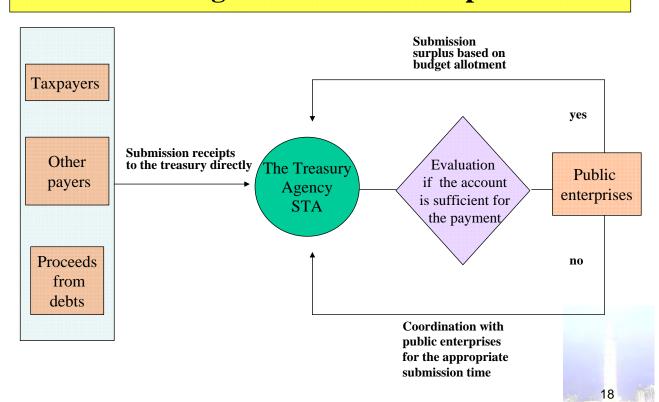
•Handling Central Government Agency Deposits

Central Government Agencies are required to make the deposits with the Central Bank or other delegated banks

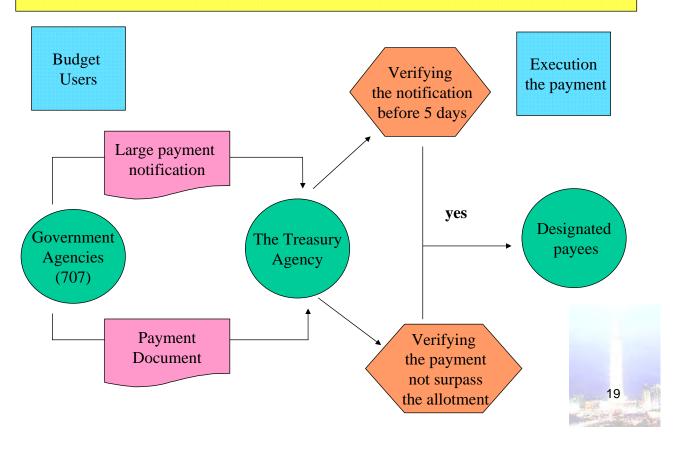
•Managing Central Government Bonds/Treasury Bills

Performing services related to the issuance, registration, transfer, redemption, and interest payment of central government bonds/bills

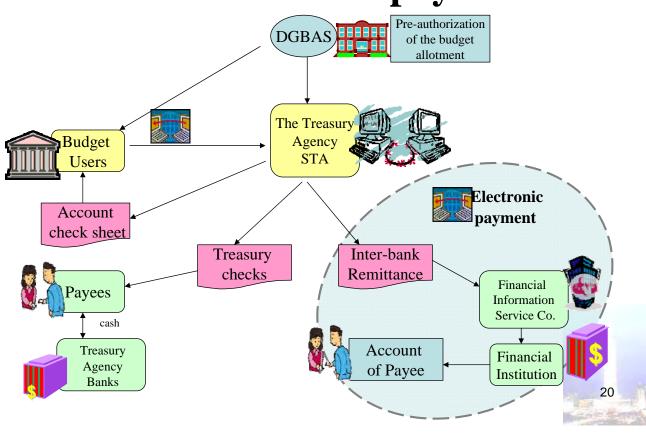
#### **Management of cash receipts**



#### **Management of cash payments**



#### The channels of payment



#### **Cash flow forecasting**

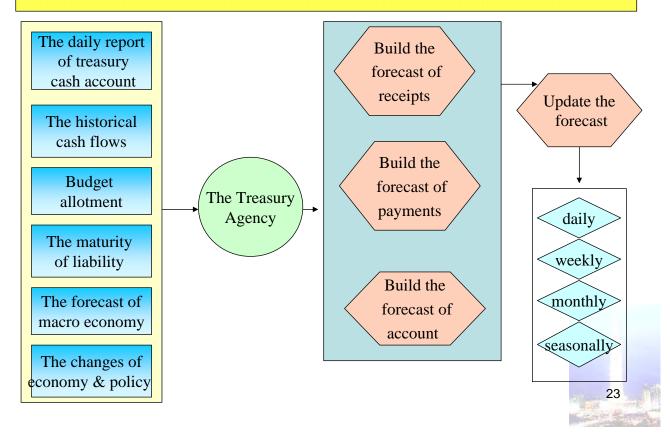
21

#### **Cash flow forecasting(1)**

For effective cash management, the government needs to develop accurate and timely forecasts of cash inflows and outflows

- Collect Data
   Collect and maintain all historical data on payments and receipts
- •Collect Information
  - budget, budget allotment, the forecast of macro economy, the maturity of liability, the changes of economy & policy, etc.
- Cash flow forecasting model

#### Cash flow forecasting(2)- Cash flow forecasting model



#### **Cash flow forecasting(3)**

#### The Challenges

- •The international and domestic economic situations
- •The change of domestic policy
- •The timely and accurate information
  - The adjustment of the budget allotment
  - The delay of large payments
  - **–** .......

# Management of government cash balance

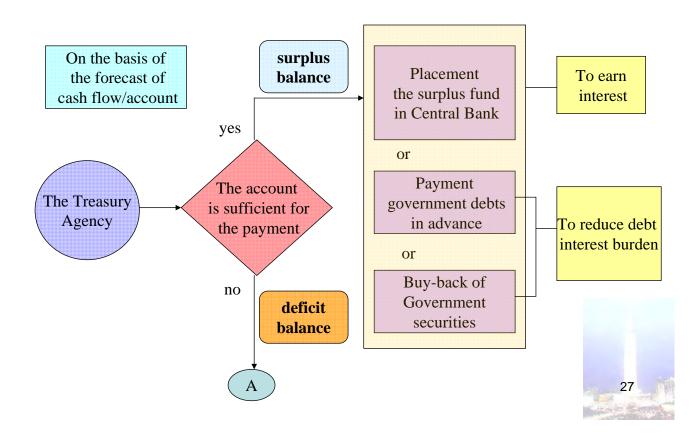
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#### Management of cash balance(1)

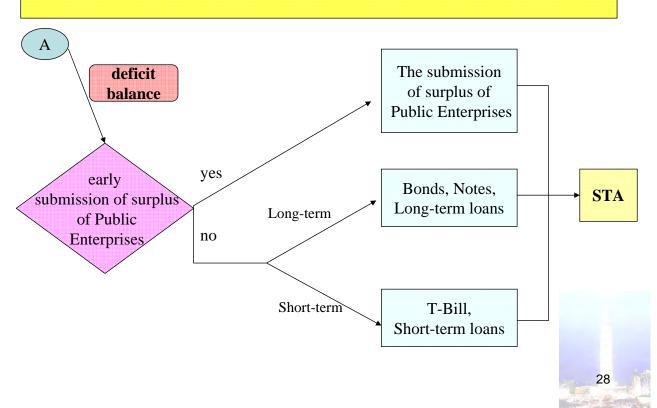
The contradiction of cash management

Balance	High	Low		
Payment risk	Safe	Unsafe		
Cost	Inefficient	efficient		

#### Management of cash balance(1)



#### Management of cash balance(2)



#### Matching debt management

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#### Matching debt management

- Issue Government bonds and treasury bills
  - Regular issue
  - Long and short term loans
- National debt repayment and interest payment
- Buyback government bonds and treasury bills

# Two-phases announcement of government bonds and T-bills issuance

#### **Measures**

**Phase one:** An early announcement at year-end regarding the terms of bonds and T-bills that will be issued at every month for the following year.

Phase two: On quarterly basis, an announcement regarding the details of bonds and T-bills that will be issued for the next quarter, such as the issue amount, auction date, and issue date, etc.

# Two-phases announcement of government bonds and T-bills

Objectives

Effectively construct yield curve for bond and treasury bill markets.

With predictable and transparent issuance plan, bond and treasury bill markets become more stable and efficient. With regularized government bond and treasury bill issuances, investors can make early planning and reduce market expectations.

# Example of government bonds First phase announcement

FY 2012

Month	JAN.	FEB.	MAR.	APR.	MAY.	JUN.
Type & Maturity	New 5-year New 20-year	New 2-year New 30-year	New 10-year New 20-year	Reopen 5-year Reopen 20-year	Reopen 30-year New 10-year	Reopen 10-year
Month	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
Type & Maturity	New Strippable 5-year	New 20-year New 30-year	New 10-year	Reopen Strippable 5-year	Reopen 20-year Reopen 30-year	Reopen 10-year

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# Example of government bonds Second phase announcement FY2012

Month	Jan.		Feb .		Mar.	
Maturity	5-year	20-year	2-year	30-year	10-year	20-year
Auction Date	Jan 3 (Tue)	Jan 17 (Tue)	Feb 1 (Wed)	Feb 8 (Wed)	Mar 3 (Sat)	Mar 13 (Tue)
Issue Date	Jan 6 (Fri)	Jan 20 (Fri)	Feb 4 (Sat)	Feb 13 (Mon)	Mar 7 (Wed)	Mar 16 (Fri)
Issue Amount (NT\$100 million)	400	400	300	350	400	400

# **Buy-back of government securities Benefits**

#### **Objectives**

To adjust the maturity structure of the central government debt and enhance the debt management

- •enhance investors'
  willingness for future
  investments in
  government bonds
  through a diversified
  capital operation strategy.
- •reduce the government's interest expense and enhance efficiency of government finance.

**Matching monetary policy** 

#### **Matching monetary policy**

- Central bank is the treasury agent: treasury single account
- Central bank is the national debt agent
  - To connect with central bank about issue amount, date and type etc. of government bonds and treasury bills
  - national debt repayment and interest payment
  - buyback government bonds and treasury bills
- In order to match monetary policy, treasury offer cash management information to central bank.
- It gives short-term interest rate benchmark to central that regular treasury bills issue.

Perspective

#### **Perspective**

- Strengthening the cash forecasting capacity by a good information system which would adjust receipts and payments forecast automatically based on a rolling basis
- Increasing the flexibility and diversity for managing the excess cash

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#### Thank you



# 四、國庫及政府財務管理資訊系統在東亞經濟體之發展現況

#### OVERVIEW OF VIETNAM STATE TREASURY AND THE TABMIS (TREASURY AND BUDGET MANAGEMENT INFORMATION SYSTEM)

MINISTRY OF FINANCE – STATE TREASURY OF VIETNAM

Kazan 26-27 Mar

#### VST's Incorporation & Development History

- Vietnam State Treasury (VST) under the Ministry of Finance (MOF) was established and came into operation on 1st April 1990 according to the Decision No. 07/HDBT dated 4th January 1990 of the Ministerial Council (now the Government).
- During its 20 years of development, VST's functions and duties have had a lot of changes based on the situation of the public financial management reform of Vietnam:
  - On 5th April 1995, the Government issued the Decree No. 25/CP providing the power, duties and organization of the new system of VST.
  - As requested by the Government, in 2000, VST was delegated the task of investment capital payment control which used to be handled by the General Department of Investment Development.

#### VST's Incorporation & Development History

- Since 2006, to implement public financial management reform project, VST has been assigned to lead the development and implementation of a Treasury and Budget Management Information System (TABMIS) and made great reform in budget processes and State accounting policy:
- Development and application of new budget processes suitable with TABMIS.
  - Development and implementation of State accounting policy applicable to TABMIS
  - Introduction of several international practices to State budget management mechanism such as commitment control process

#### VST's Incorporation & Development History

- To meet this new requirement, the Prime Minister issued on 26th August 2009 the Decision No. 108/2009/QD-TTg providing the power, functions, duties and organization structure of VST under the Ministry of Finance.
- According to the Decision No.108/2009/QD-TTg, VST is a system belonging to the Ministry of Finance which consists of State Treasury at the central level, 63 provincial treasury offices and over 650 district-level treasury offices. The number of its staff belongs to the operation volume of each locality. The organization model of VST is as follows:

# ORGANIZATION CHART OF VIETNAM STATE TREASURY (Decision No.108/QD-TTg dated 26/8/2009 signed by PM) MILLITRY OF FINANCE VIETNAM STATE TREASURY (Decision No.108/QD-TTg dated 26/8/2009 signed by PM) MILLITRY OF FINANCE VIETNAM STATE TREASURY VIETNAM STATE TREASURY FROM PROPERTY OF FINANCE VIETNAM STATE TREASURY VIETNAM STATE TREASURY FROM PROPERTY OF FINANCE PROVINCIAL STATE TREASURY Office O

#### **VST's Functions**

- To help the Minister of Finance in managing the State budget funds, State financial funds and other State funds;
- To do Government treasury management;
- To hold the State Accounting;
- To mobilize capital for the State budget and development investment through issuing Government bonds prescribed by the laws.

#### VST's Duties

- To manage over the State budget, financial funds and other State funds and assets.
- To organize State budget accounting, accounting of State funds and assets.
- To undertake centralized and unified cash management and payment.
- To mobilize capital for the State budget and for development investment by issuing Government bonds.
- To carry out modernization of VST operations.
- Others as regulated by competent authorities and the laws of Vietnam.

#### Development orientations of VST to 2020

- To develop the modern, safe, effective and sustainable State Treasury on the basis of policy and institutional reform, improvement of the organization mechanism, association with technology modernization and human resources development...
- By 2020, all treasury activities will be done on the platform of modern IT and form electronic Treasury.

#### Development orientations of VST to 2020

- To associate cash management with State budget management process from budgeting, allocation, execution, accounting and final accounts via State budget accounting reform, improvement of information system, financial reports;
- Revenues and expenditures of State financial funds will be done via State treasury centralized account;
- To carry out payment control according to performance outputs, budget duties and programs; categorize State budget expenditures as per contents and amount to develop an effective payment control process on the principle of risk management;

#### Development orientations of VST to 2020

- To follow the centralized payment model towards the opening of State Treasury's centralized account at the Central Bank for centralized cash management of the whole treasury system;
- To perform the model of the Treasury which specializes in cash management, Government debt management with the basic functions of developing capital mobilization plans in the market, managing cash and cash flows, cash investment ...

#### Development orientations of VST to 2020

- To develop the modern, unified State accounting system on the accrual basis to serve the requirements for open and transparent public finance and budget management;
- To integrate into the global State accounting, develop State accounting standards in conformity to the international public accounting standards;

#### Development orientations of VST to 2020

- To modernize VST's payments on a modern IT platform in the direction of modernization and speeding up transaction processing;
- To take part in bilateral electronic payment system, inter-bank electronic payment system, electronic clearing payment with banks

#### IT development orientations to 2020

- By 2020, State treasury activities will be done on a modern IT platform and form electronic Treasury.
- To develop an overall architecture of State treasury information system with the Treasury and Budget Management Information System as the back-bone to meet the requirements of budget-finance management reform;

#### IT development orientations to 2020

- To implement the safety and security system for State treasury information system; To set up the prevention system for disaster recovery;
- To apply modern, integrated and professional Information Technology in all State treasury activities; in which giving priority to the investment and use of advanced software suitable for budget-finance management requirements in the new situation and international practices ...

#### **TABMIS Overview**

- TABMIS Project is the biggest component with longest implementation time of Public Financial Management Reform Project (PFMRP).
- Targets:
  - Modernizing State Budget management: planning, implementation, reporting and enhancement of budget accountability of Ministry of Finance;
  - Improving transparency of public financial management;
  - Ensuring financial security in the national development and international

#### **TABMIS Overview**

- TABMIS is designed and built based on: the Treasury Reference Model (TRM) of WB and IMF; International Public Sector Accounting Standards (IPSAS)
- Using Oracle Financials for public sector with centralized architecture.

#### **TABMIS Overview**

- TABMIS has interfaces with legacy systems:
  - Treasury Accounting system (KTKB)
  - Tax collection management system
  - Debt management system
  - Bank payment systems
  - MOF common code list database

#### **TABMIS Overview**

- TABMIS will be deployed to over 1,500 sites of the whole treasury system, have connections to financial agencies of all levels and major spending ministries.
- Started in mid-2006, the Project has completed the design/build phase. It was in the integration phase with pilot implementation in mid -2009 and roll-out after that.

#### Scope of Implementation

- Units having State budget revenues and expenditures, including those in the State Treasury system and financial agencies.
- Financial agencies of ministries/branches which will operate online in TABMIS.

#### **Business processes in TABMIS**

- In the current design, TABMIS consists of the following modules:
  - Budget Allocation Module (BA)
  - Accounts Receivables Module (AR)
  - Accounts Payables Module (AP)
  - Purchase Order/Commitment Module (PO)
  - Cash Management Module (CM)
  - General Ledger (GL)

#### **Business processes in TABMIS**

- General Ledger (GL): recording and accounting receipts and spendings as per the unified COA structure.
- Budget Allocation (BA): managing budget allocation and adjustment processes, processing balances, making carryforward balances, opening next fiscal year ...

#### Business processes in TABMIS

- Accounts Receivables (AR): recording budget collections from tax collection management system, splitting to different levels of budget, keeping track and managing revenue from grants and borrowings from debt management system.
- Purchasing (Purchase Order): managing purchasing contracts and reserving fund for contracts.
- Accounts Payables (AP): managing payments of spending units

#### **Business processes in TABMIS**

- Cash Management (CM): making cash forecasting, managing fund at the Centre, recording bank interests/charges and making reconciliation of payments.
- Financial Reporting: generating pre-formatted reports (which are customized as per MOF's requirements); generating reports from the system data warehouse.

#### **Experience in TABMIS Implementation**

- Implementation Roadmap:
  - Pilot go-live to Hai Phong in April 2009
  - Rollouts started since September 2009. Completion is expected by late 2012.
- Implementation Methodology
  - Pilot go-live to one province of medium-sized scope with medium volume of transactions
  - Minimize customizations to the system functionalities.
     Harmoniously handle institutional changes and system customizations.
  - Organized and well maintained channel direct support and helpdesk

#### **Experience in TABMIS Implementation**

- Continued support and commitment from MOF Senior
   Management and other key Stakeholders
- Develop and implement standard processes that can be rolled out efficiently and provide consistency to user
- Build and maintain a dedicated team at all levels to deliver the project goals
- Facilitate and optimize transfer of knowledge and skills from supplier to the MOF core and extended team members
- Ensure users are engaged, trained and committed to supporting the new system and solutions

#### Experience in TABMIS Implementation

- Results achieved:
  - At the end of 2011, TABMIS has been rolled out to 46 cities/provinces and the Centre. Synchronization of centrallevel budget allocations has been done for two ministries.
  - 40 customized reports have been developed and improved to serve management requirements.
  - Several system functionalities have been customized for suitability with management requirements of Vietnam.



# SPAN IFMIS Project in Indonesia

March 26-27, 2012 Kazan, Rusia



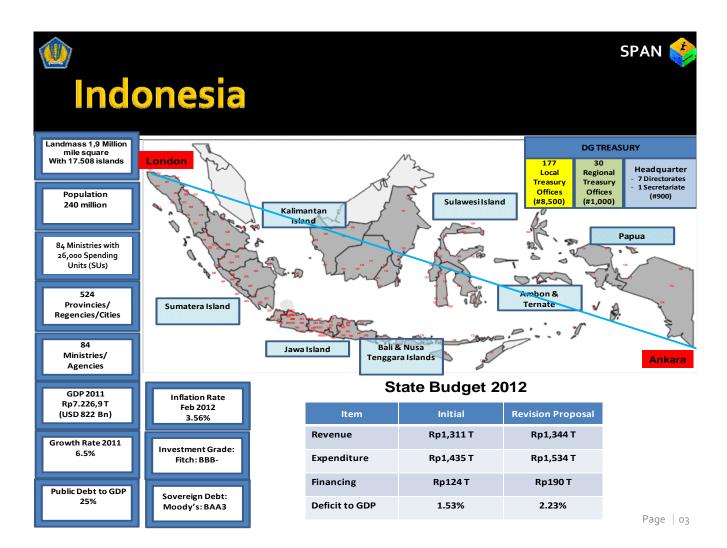
Ministry of Finance - Republic of Indonesia





#### Agenda

- Indonesia at glance
- Roadmap of PFM Reform and SPAN
- Design of SPAN
- Governance and Implementation
- Plans for SPAN and IT Integration









#### Roadmap of PFM Reform

- •1999: Decentralization law
- •2003: White Paper of PFM reform
- •2003: State Finance Law •2004: State Treasury Law
- •2004: Audit of the management
- and accountability of the state

#### Establishing IFMIS Project in Indonesia:

- •22 Dec 2004 to 2014: Government Financial Management and Revenue Administration Program (GFMRAP), \$60 million WB investment loan for implementing IFMIS
- •12 Oct 2006 to 2017: PFM MDTF Part I (\$24 m) and Part II (\$10 m) grants to complement the WB GFMRAP and also to support a broad range of PFM reform initiatives.

#### Contracts for implementing SPAN

- •IVV (Independent Validation and Verification) consultant to
- assist project preparation and procurement
- •COTS and Systems Integrator (Turnkey) to deliver COTS Solution; Infrastructure, DC & DRC; Telecom links; Cabling
- •BPI (Business Process Improvement) consultant (2007-2011)
- •CMC (Change Management and Communication)
- •PMQA (Project Management and Quality Assurance)
- •SAKTI (Spending Unit Application developer)

#### 1999-2004

#### 2005-2009

#### 2009-2011 and beyond

#### Creation of new Directorate

- •DG Budget (budget formulation and preparation)
- •DG Treasury (budget execution and treasury mgt - 2005)
- •DG Fiscal Balance (management of transfer funds to the local governments - 2006)
- DG Debt Management (management of foreign and domestic loans)
- •DGSAM (management of state assets and receivables - 2006)

#### Procedural improvements to support PFM reforms:

- Unified budget system: combined recurrent and development budget
- •Introduction of performance based budgeting and Medium Term Expenditure Framework (MTEF)
- •Reforming business processes in the Local Treasury Offices (KPPN) through the establishment of pilot showcase offices that reduce payment processing time from 2 days to sometimes 1 hour.
- Establishing government accounting standard and reorienting the chart of accounts
- •Reforming the government procurement process (Keppres
- •MOF as one of the selected ministries to implement bureaucratic reform (BR) program

#### Continuous improvements to support PFM reforms:

#### Implementation of performance based budgeting

- •The new simplified budget document which focus on performance rather than detailed line item.
- •Performance information (including its formulated target and indicators)
- •Full implementation and expanded coverage of the Treasury Single Account
- •Continuing improvement on cash management, including deepening and stabilizing cash plan and forecasting , idle cash management, better coordination with debt management
- •Deepening bureaucratic reforms within MoF
- •Full integration of all information technology within MoF
- •Implementation of accrual accounting





#### **SPAN Scope**

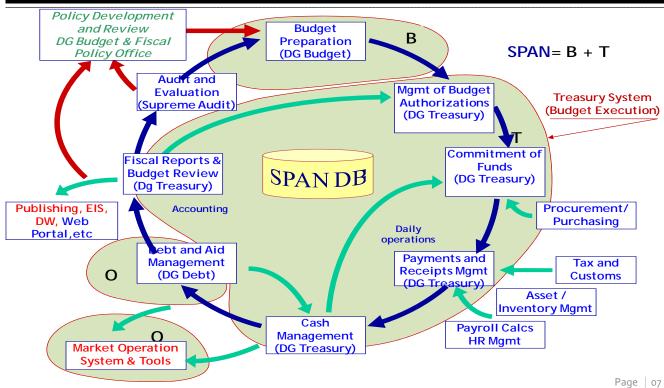
#### **Strategic Objectives**

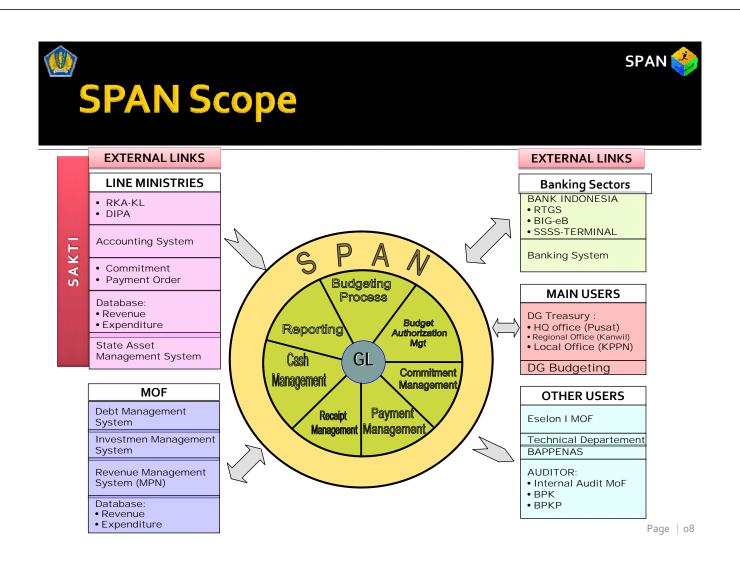
- Facilitate policy orientation of the budget
- Promote accountability of budget users
- Improve efficiency of Treasury services
- Transition from functional silos to process oriented organization structures
- Significantly improve cash management
- Anchor accounting and reporting reforms
- Reduce opportunities for rent seeking
- Ensure security and credibility of financial data

**SPAN SPAN Scope** SPAN Projects (each by separate contracts) Policy Reform Business Process Improvement The preparation and implementation of changes brought about by SPAN to: · Government regulations, SPAN · The government accounting framework, · The move to full accrual accounting. **SPAN Components**  Data Center & Disaster Recovery Center **Business Process Reform**  Cabling Installation Wide Area Network Comprehensive business process improvements that will align the business processes in both DG Budget and DG Treasury through the application of an IT-based Collaboration Environment work processes. COTS Solution Hyperion Planning & Budgeting for **Budget Preparation IT System Reform** Oracle e-Business Suite for Budget · Standardized & integrated IT architecture Execution · Structured IT Governance Resource optimization through Common Service Provision SAKTI · IT services through SLAs (Service Level Agreements) ICT Shared Services Strategy **Change Management & Communications** Service Desk for User Support Achievement of strong commitment and full support for the reform program Management of change brought about by SPAN through training, knowledge transfer, and consideration of MoF organizational policies Change Management & Communications

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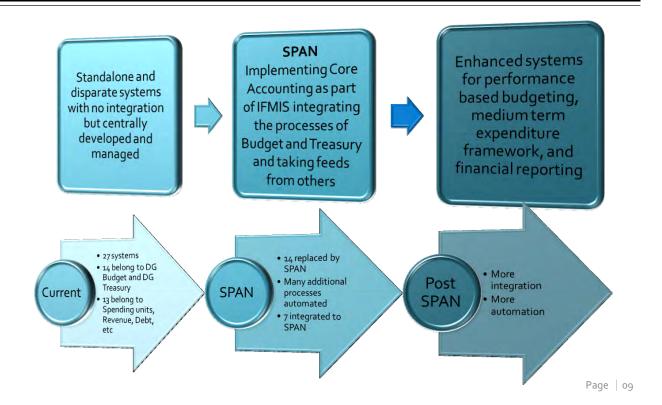


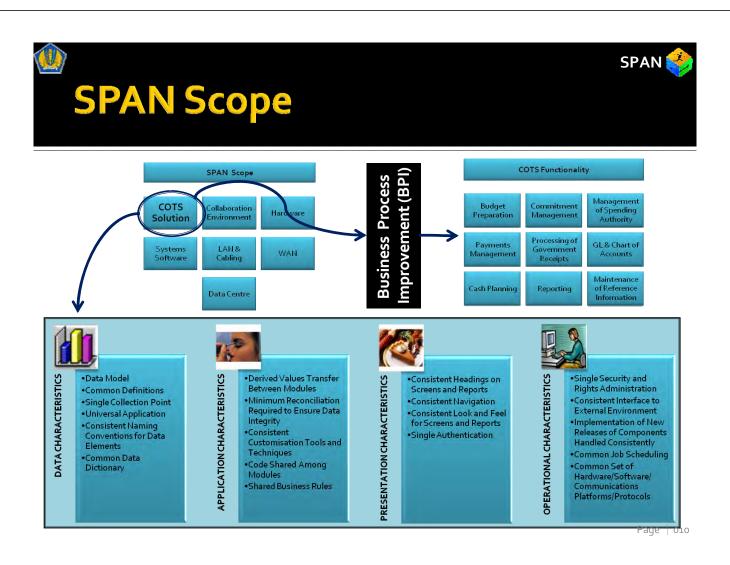


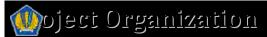




#### **SPAN Scope**

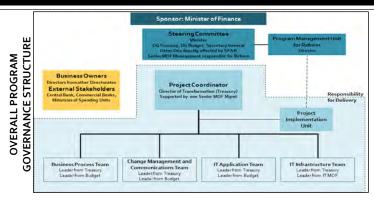


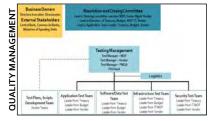






### Governance & Implementation









#### Ensuring a greater chance of success in implementing SPAN

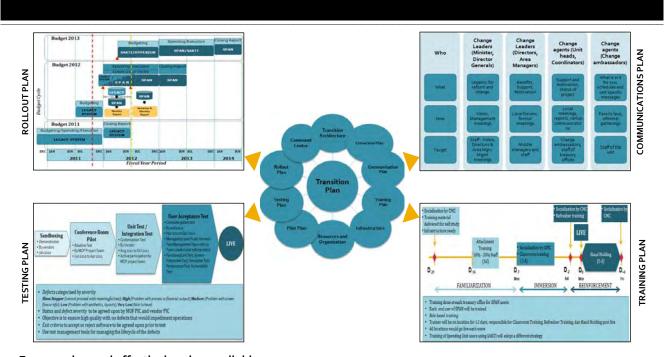
- Project governance
- · Augmenting resources through consultants (IVV, PMQA, CMC) and more importantly continuous training

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#### oject Organization



#### **Governance & Implementation**



#### Empowering and effectively using available resources

- Detailed plans
- Communicated well in time

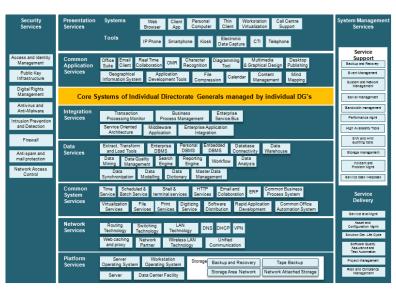




#### Future plan for IT Integration at MOF

- Ministry of Finance is implementing IT Shared Services
- Business process of individual departments would be retained at the department level while common services would be managed by the MOF Shared Services





MOF Shared Services will manage SPAN infrastructure in the newly consolidated data centre

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- PFM Reform is a long drawn process comprising of multiple change initiatives affecting regulation, process, systems and people
- IFMIS systems accelerate reform and must be chosen and designed well
- IT and program governance coupled with proper planning ensures a greater chance of success
- Resources need to be augmented
- IFMIS system creates an opportunity for further integration

## THANK YOU

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