Part 1

Standard Chartered innovation
SCB is building payment and transaction capabilities, digitizing the bank internally and selectively going for digital alliances

**Digital Alliances**
- Participate in new payment systems
- Work with various partners to build ecosystems for better reach and access to consumers.

**Building a Digital Bank**
- Build a platform for a digital bank via enhancing internal system capabilities
- Digitize the bank internally across the value chain
- Tab banking originations
- STP through AIP solution for lending products

**Digitizing the bank internally**
- Build Cross-border remittance capability
- Bridge key payment capability gaps – instant transfers, contactless payments, digital payments etc
- Look beyond traditional plastics as a payment mechanism and invest in wallets working with Visa/Master schemes and building security through Tokenization

**Bridge Key Payment gaps**
- SCB wants to be the ubiquitous payment capability service provider – Local & Cross Border
- SCB will be using a combination of internal builds and strategic external partnerships to offer world class capabilities to our clients
SCB’s approach – strategic builds with external partnerships

Some examples in the consumer banking world

<table>
<thead>
<tr>
<th>Categories</th>
<th>Who?</th>
<th>Where?</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM wallets</td>
<td></td>
<td>HK – Apple Pay, Android Pay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SG – Apple Pay, Samsung Pay and Android Pay</td>
</tr>
<tr>
<td>Scheme wallets</td>
<td>MasterPass</td>
<td>SG, HK, UAE; other markets being planned in phase 2 developments</td>
</tr>
<tr>
<td></td>
<td>Visa Checkout</td>
<td>Visa Checkout – SG, HK, UAE, CN, MY</td>
</tr>
<tr>
<td>Mobile wallets / P2P payments</td>
<td>Alipay, O! E Pay, DASH, MPesa</td>
<td>Alipay – China, O! E Pay – Hong Kong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DASH – Singapore, MPesa – Kenya</td>
</tr>
<tr>
<td>Domestic transfers</td>
<td>IMPS, KITS, EFTS, FAST</td>
<td>IMPS – India, KITS – Kenya, EFTS – Bahrain, FAST - Singapore</td>
</tr>
<tr>
<td>Enhanced P2P capabilities</td>
<td>UPI, DASH, MPesa</td>
<td>UPI – India, DASH – Singapore, MPesa – Kenya</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other internal builds and partnerships being planned</td>
</tr>
</tbody>
</table>
Part 2

Building technology to support the banking ecosystem
What is Distributed Ledger Technology (DLT)?

**Distributed Ledger**

- Shared digital record of transactions which are verified by a network of participants
- Records may be private or permissioned and transactions encrypted
- Also commonly termed ‘blockchain’.

**Distributed Ledger Technology (DLT)**

- Enables multiple parties to create and access a secure, transparent and immutable record of exchange, without the need for a central coordinating body
- Involves an innovative combination of four existing technologies:
  - Peer-to-peer replicated database
  - Cryptographic key encryption
  - Merkle tree hashing
  - Consensus algorithm.
Example: Real-time cross-border payments via Ripple

Background
To make interbank payments across countries, most banks relay transactions through a network of correspondent banks which can result in days-long process and increased costs for senders.

DLT* application
Interbank payments can be settled real-time as a straight-through process between Ripple-enabled banks with transactions recorded on the Ripple distributed ledger.
Intrabank transfers can also be optimised with low cost infrastructure and the elimination of reconciliation between multiple internal ledgers.

Value proposition
- **Visibility**: E2E visibility on payments, with rich information
- **Transparency**: Full transparency on charges and FX rates
- **Certainty**: 100% pre-validated and hence guaranteed
- **Real-time**: Autonomous transactions on the DL
- **Liquidity efficient**: Less intra-day liquidity intensive than CLS^®/RTGS

#CLS: Continuous Linked Settlement
^GPSG: Global Payment Steering Group
Example: Reducing trade fraud with TradeSafe

Background
Banks have traditionally used paper documents to verify genuine trades before financing. However, this has never completely removed the risk of double financing or paying fraudulent invoices.

DLT* application
Trade invoices are digitised by banks, giving them unique hash values. These invoices are then transmitted to a database, ‘TradeSafe’, which lodges them on a distributed ledger. Duplicate invoices are automatically flagged and deleted. Authorised counterparties – whether banks or government bodies – can query and check the status of invoices.

Blockchain improves efficiency and security
How distributed ledger technology can make trade finance more efficient and secure

Further information on TradeSafe

*DLT = distributed ledger technology
Part 3

Mobile Money/Mobile Wallet aggregation
Standard Chartered partners with mobile wallet providers to enable corporate payments / collections with mobile wallets seamlessly.

Connectivity to mobile wallet providers via Straight2Bank ensures:

- **Common interface** as other payables and receivables types (ACH, RTGS, TT, cheques etc.)
- **Seamless reporting** with other payables and receivables
- **Control of operational risks** via maker/checker mechanism in place
- **Standardised processes** are supported through integration between corporate ERP systems with Straight2Bank Access
- **Choice of channel** between Web and Access (Host-to-Host, ERP, SWIFT)
- **Bank-grade security** standards on communication link with MWP, providing peace of mind
- **Connectivity to multiple providers** in one country, ensuring maximum coverage

Organisation

**Straight2Bank**

- Partner bank counters
- Cheques
- Local inter-bank payments/receivables
- Cross-border payments/receivables
- Mobile wallet payments/receivables

NEW
Part 3

Case Study Vietnam – Momo
Mobile money payments ensure clear visibility of transactions unlike traditional claim payments via cheque / cashier order

**BEFORE**

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 1</th>
<th>2 – 7 days later</th>
<th>Anytime from Day 2 to 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim submission &amp; processing</td>
<td>Cheque / Cashier Order Issuance</td>
<td>Mail out via postal service</td>
<td>Claimant receives cheque</td>
</tr>
<tr>
<td>Claimant travels to nearest bank branch</td>
<td>Claimant encash cheque</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Issues with cheque / cashier order claim payments:
- Lack of visibility on payment status
- Cheque / cashier order may be unclaimed

**Dates are illustrative only**

**AFTER**

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim submission &amp; processing</td>
<td>Mobile wallet payment via Straight2Bank</td>
</tr>
<tr>
<td>Claimant receives App / SMS notification same day</td>
<td>Claimant has option to encash at MoMo agent from Day 1</td>
</tr>
</tbody>
</table>

Benefits of Straight2Bank Wallet payments
- Intra-day payment status update
- Claimant can encash on same day at any MoMo authorized agent / channels
### Before Mobile Money

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2-3</th>
<th>Day 3-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>Risks</td>
<td>Client’s Bank</td>
</tr>
</tbody>
</table>

- **Individuals pay bills through cash / bank transfers**
  - Cash handling risks
  - Lack of real time confirmation
  - Limited reach to unbanked

- **Funds credited to client’s account**
  - Manual reconciliation
  - Delay in settlement / MIS
  - Fraud / human error

### After Mobile Money

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 1 / 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>Mobile wallet provider</td>
<td>Mobile wallet provider’s bank</td>
</tr>
</tbody>
</table>

- **Individual pays from the mobile wallet by selecting the appropriate biller ID with appropriate user credentials**
- **Mobile Wallet Provider debits individual’s wallet and credits SCB**
- **Funds transferred from wallet provider’s account into SCB via interbank clearing**
- **Funds credited to client’s account**
- **Client receives collection report with the mobile numbers via Straight2Bank**

- **Reduced payment lead time**
- **Reduced cash handling risks**
- **Available to payers anytime anywhere**
- **Direct collection from payer reduces financial intermediaries and cost**
- **Timely, enriched reporting simplifies and automates the reconciliation**

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**Dates are illustrative only**
Thank you