Multi-Assets Custody System

by

DIGITAL CUSTODIAN COMPANY

Formerly
MCB Financial Services Limited

Pakistan's first Blockchain FinTech providing digitized asset servicing platform for Trustee/ Custodian/Independent Asset-Holding, Asset (Shares) Registry & Authorized Intermediary Functions

Trustee
For Asset Management Companies of Mutual Funds

Custodian
For Mutual Fund Investors (Individual and Corporate)

Trustee
For Debt Market Securities Industry

MACS CORE

MODULES

E-Registry
Demat Shares Registry for listed/unlisted companies

Intermediary
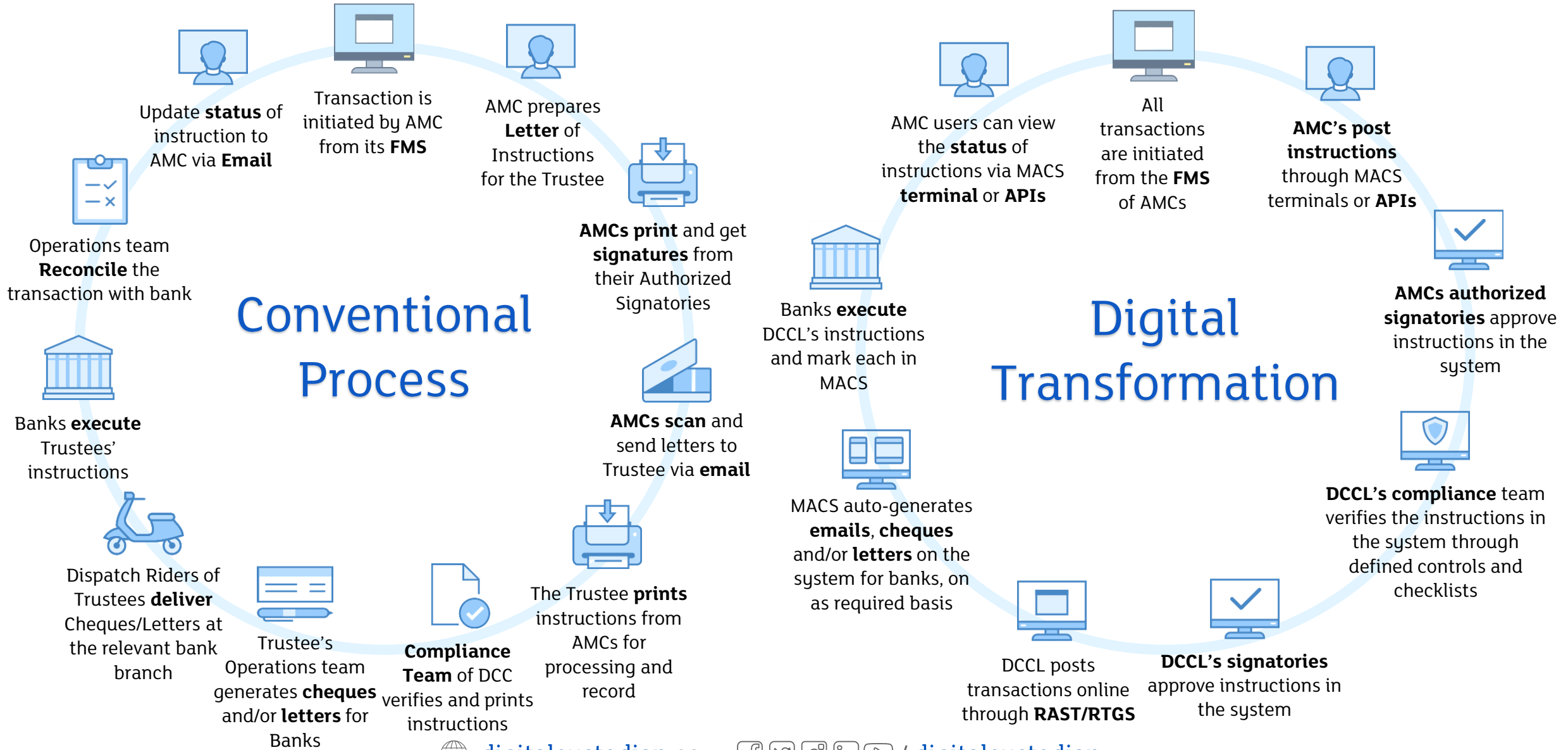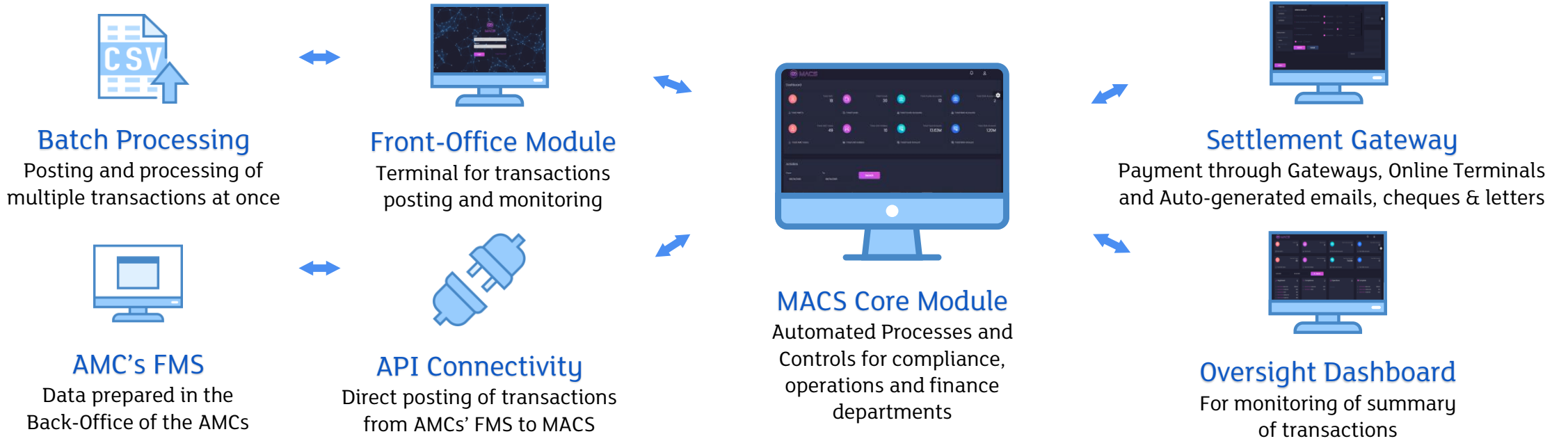Authorized Intermediary Services for corporates

ESOS
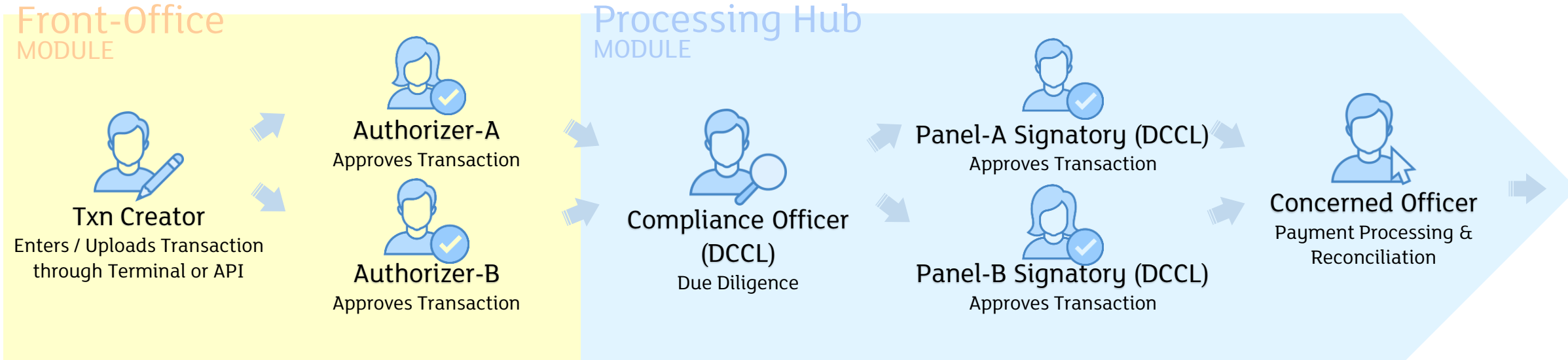Registry for Employees Stock Option Scheme of Corporates

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Transformation of Functions

Conventional Process

- Update **status** of instruction to AMC via **Email**
- Transaction is initiated by AMC from its **FMS**
- AMC prepares **Letter** of Instructions for the Trustee
- **AMCs print** and get **signatures** from their Authorized Signatories
- Operations team **Reconcile** the transaction with bank
- Banks **execute** Trustees' instructions
- **AMCs scan** and send letters to Trustee via **email**
- Dispatch Riders of Trustees **deliver** Cheques/Letters at the relevant bank branch
- Trustee's Operations team generates **cheques** and/or **letters** for Banks
- **Compliance Team** of DCC verifies and prints instructions
- The Trustee **prints** instructions from AMCs for processing and record

Digital Transformation

- AMC users can view the **status** of instructions via MACS **terminal** or **APIs**
- All transactions are initiated from the **FMS** of AMCs
- **AMC's post instructions** through MACS terminals or **APIs**
- **AMCs authorized signatories** approve instructions in the system
- Banks **execute** DCCL's instructions and mark each in MACS
- **DCCL's compliance** team verifies the instructions in the system through defined controls and checklists
- MACS auto-generates **emails**, **cheques** and/or **letters** on the system for banks, on as required basis
- **DCCL's signatories** approve instructions in the system
- DCCL posts transactions online through **RAST/RTGS**

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Integrated System

Batch Processing
Posting and processing of multiple transactions at once

Front-Office Module
Terminal for transactions posting and monitoring

Settlement Gateway
Payment through Gateways, Online Terminals and Auto-generated emails, cheques & letters

AMC's FMS
Data prepared in the Back-Office of the AMCs

API Connectivity
Direct posting of transactions from AMCs' FMS to MACS

MACS Core Module
Automated Processes and Controls for compliance, operations and finance departments

Oversight Dashboard
For monitoring of summary of transactions

Transaction Process

Front-Office MODULE

Processing Hub MODULE

Txn Creator
Enters / Uploads Transaction through Terminal or API

Authorizer-A
Approves Transaction

Authorizer-B
Approves Transaction

Compliance Officer (DCCL)
Due Diligence

Panel-A Signatory (DCCL)
Approves Transaction

Panel-B Signatory (DCCL)
Approves Transaction

Concerned Officer
Payment Processing & Reconciliation

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Distinctive Features

Compared to other systems in the market

Assistive Role

The system maintains ledgers to assists AMCs in accounting, calculations related to units, transactions, taxes and other deductions

Easy Accessibility

MACS is online. It can run on any PC of AMC team. No dedicated PC or separate link/ bandwidth is required
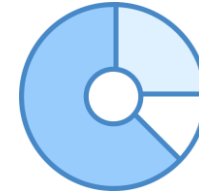
Added Back-Office Features

The system manages the portfolios of unit-holders and fund investments, to strengthen their compliance and oversight

Modern Interface

The Graphical User Interface (GUI) of the system is aesthetically attractive and friendly to eyes for daily use

Top Benefits of MACS

Digital Processing & Fast Settlement

Provides considerable time savings in end-to-end transactions processing with ever simpler, faster and digitized processes.

Provides more information in a shorter period.

Automated Compliance with Reduced Risks

Boosts compliance functions of AMCs by reducing risks of human errors.

Audit trails of each activity is recorded and reconciliations with banks is simplified.

Unit Holders' Ledgers & Fund Portfolios

Thorough Unit Holders' ledgers for compliance.

Excessive redemption of units is notified instantly.

Investment portfolios of each fund are managed.

Less Resources & Reduced Costs

Reduces expenses (on resources and HR) because of integrated digitized processes and distributed data.

Requires no separate links and high bandwidths for MACS connectivity.

Enhanced Security and Authenticity

Security of ledgers is enhanced due to encryption, data access controls, and locking of data with timestamp.

Digital Signatures for authenticity of user's activity, two-factor authentication and OTPs

Transparency and Surveillance

Identical copy of data exists on all terminals; therefore, data is not in control of any single person or entity.

Statistics of daily activity made visible to SECP and MUFAP at their dashboards.

Integration with **CDC** Terminal

Payment **Gateway** Integration

Investors/ Shareholders App

Fetching record of new shareholders and their holdings

Payment disbursements into investors' accounts

- Account Statements
- Dividends / Transactions Notifications

Dividend disbursements and payments to investors' accounts

Updation of Corporate Actions (Bonus and Right Shares allotment)

- Subscribe to IPOs
- Purchase shares
- Request for duplicate shares
- Right shares subscription

OTP Verification and due diligence

MACS Pro
Digitized Asset Servicing

Shares **Registry** Terminal

Dashboard and reports

Corporate Actions

Investor info for KYC, DD and EDD

KYC confirmation

Integration with **CKO**

Transaction status and reconciliation

Mutual Fund transactions

Transaction instructions

Mark executed or rejected with reasoning

Statists of activities for surveillance / oversight

AMC Terminal

Bank Terminal

SECP Dashboard

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Window 1 (182.191.93.242:3005/admin/post-transaction)

Transaction Types

Unit Management
- Sale of Units
- Conversion of Units
- Conversion In
- Conversion Out
- Redemption of Units

Fund Management
- Fund Transfer
- Fund Outflow
- Fund Inflow
- Fund Dividend Payout

Investments
- Money Market Investments
- Bank Profit
- Equity Investment
- Dividend on Investment
- Cash Margin Deposit
- Cash Margin Release

Fee Payments
- Advisory Fee
- Auditors Fee
- Bank Charges
- Management Fee
- Trustee Fee
- Custody Fee
- Shariah Advisory Fee
- CDC Fee
- Listing Fee

Window 2 (182.191.93.242:3005/admin/view)

Registered — 101

	Amount
Sale of Units — TXN_1636549589113	5,129,630.00
Sale of Units — TXN_1636551399035	5,129.63
Sale of Units — TXN_1636551798545	2,051.86
Sale of Units — TXN_1636551945239	452.06
Sale of Units — TXN_1636552157282	550.21
Sale of Units — TXN_1636617382046	2,564.82

Compliance — 16

	Amount
Equity Investment — TXN_1637055694723	NaN
Money Market Investments — TXN_1637127280259	149,999.94
Dividend On Investment — TXN_1637149692665	731.25
Fund Dividend Payout — TXN_1637239798009	12,345
Fund Dividend Payout — TXN_1637239798010	54,321
Money Market Investments — TXN_1637330994046	9,920.00

Operations — 1

	Amount
Fund Transfer — TXN_1636731952989	12

Complete — 80

	Amount
Sale of Units — TXN_1636549589113	5,129,630.00
Sale of Units — TXN_1636617382046	2,564.82
Sale of Units — TXN_1636629551149	51,296.30
Conversion in — TXN_1636663413637	30,777.78
Sale of Units — TXN_1636663349887	59,881.16
Sale of Units — TXN_1636694899480	25,000.00

Instruction

AMC*

Pak Russia Investment Company Limited (PRICL)

Fund Name*

PRICL GOVERMENT SEURITY FUND (PRICLGSF)

Instruction Date

01/12/2021

Execution Date

01/12/2021

Fund Account

Fund Account*

SAUD PSX (DCCL Trustee PRICL Govt Security fund)

Account Title*

DCCL Trustee PRICL Govt Security fund

Account Number*

PK92 SAUD 1122 4455 4455

Bank

SAUD

Branch

PSX

Counter Account

Unit Holder

UAT Adnan Khan (PRICL-1002)

Account Title

Uat Adnan khan UH

Account Number

PK92 Saud 1111 5555 8888

Bank

SILK BANK LIMITED (SAUD)

Branch

Select...

Instrument

Mode of Payment*

Cheque   50000

Instrument Type

Cheque

Instrument No./Reference No

123456789

Instrument Date / Deposit Date

01/12/2021

Transaction Details

Folio Number*

PRICL-1002

Sale Date

22/11/2021   **Load**

NAV Price*

8.5555

Sale Price

8.9561

% Discount on Load

0

Applicable Unit Load

0.4005

Applicable Price

8.9561

Units Sold*   5,582.7872

5582.7872

Current Holding*

21831.2017

Total Holding*

27413.9889

Amount

Gross Amount*   50,000

50000

Fifty Thousand Only

Sale Load

2235.91

Net Amount   47,764.09

47764.09

Forty-seven Thousand, Seven Hundred Sixty-four and Nine Paisa Only

Payment Type

Receipt

Instruction

AMC*
Pak Russia Investment Company Limited (PRICL)

Fund Name*
PRICL GOVERMENT SEURITY FUND (PRICLGSF)

Instruction Date
01/12/2021

Execution Date
01/12/2021

Fund Account

Fund Account*
SAUD PSX (DCCL Trustee PRICL Govt Security fund)

Account Title*
DCCL Trustee PRICL Govt Security fund

Account Number*
PK92 SAUD 1122 4455 4455

Bank
SAUD

Branch
PSX

Counter Account

DCC
Digital Custodian Company-DCC-001

Account Title
MCB Financial Services Limited

Account Number
PK28MUCB0000101010116558

Bank
MCB BANK LIMITED (MUCB)

Branch
Select...

Instrument

Mode of Payment*
RTGS   25863

Instrument Type
Cheque

Transaction Details

Detail*

Sales Tax Collector
SRB - Sindh Revenue Board

Amount

Gross Amount*   25,863
25863
Twenty-five Thousand, Eight Hundred Sixty-three Only

SST/PST %
13

SST/PST Amount
3362.19

Total Amount
29225.19

WH IT %
8

WH Income Tax Amount
2338.02

WH ST %
20

WH Sale Tax Amount
672.44

Net Amount   26,214.73
26214.73

Key Contacts

Scan QR codes with mobile app to save contacts

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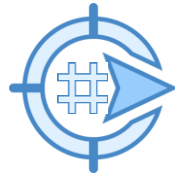naeem.rahman@digitalcustodian.co

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Blockchain
Components

Characteristics

Cryptography
Encrypting data to unrecognizable format at one end. **Decrypting** back to original format for privileged user only

Hashing
One-way encryption in which data can not be reverted back to original format. Fixed length hash of each block is saved in next block to link them. Unauthorized change breaks link and invalidates node

Digital Signatures
Authenticity of each participant is validated by **Certification Authority (CA)** using **private/public key infrastructure**

P2P Network
In **Peer-to-Peer Network,** each node communicates with other nodes directly, without a central authority, to maintain **Distributed Ledgers**.

Powers
Proven platform to run more than 2 trillion dollars **Crypto-Currency** Market across the globe

Transparency
All network participants have a **copy of the ledger** for complete transparency

Secure
All records are individually **encrypted** and accessible to owners only

Immutable
All validated records are **irreversible** and cannot be changed

Time-stamped
Every transaction is locked and **timestamped** in blocks

Unanimous
All network participants agree to the validity of each transaction using **consensus algorithm**

Anonymous
The **identity** of all participants can either be anonymous or pseudonymous

Smart Contracts
Data can be **managed** only through programmable Smart Contracts

Transaction Processing

A user initiates a transaction → A block of the transaction is created → The block is broadcasted to all nodes of the network → All nodes validate the block → The validated block is added to the chain → The transaction gets verified and executed