**Financial Transactions API specification**

## Context

To identify all information to be captured with regards to the transaction domain.

As part of our solution we are proposing for a housing stream to develop the first version of this service as a pilot. This will help to target services more effectively, achieve better outcomes and enhance performance monitoring while reducing cost and risk. This means that we can offer a deeper, more citizen-centric self-service capability, enabling even more service transactions to be carried out online.

## Functions

* Actual Transactions - All transactions related to a person/asset for a predefined period of time.
* Balance - The current balance calculated based on the charges and payments.

## Vision

* A single, centralized data source, holding all transaction data, updated by multiple services.
* A reusable microservice API used for managing that data.
* Avoidance of any duplication of data, a normalised view and consistency across the board.
* Reducing development costs across all streams.

## User Needs

1. As a **housing income officer**, I would like to generate an annual statement for the Tenants.
2. As a **housing income officer**, I would like to generate a statement as and when advised by the Tenant)
3. As a **housing income officer**, I need to find out the arrears
4. As a **tenant**, I would like to make a Cash payment which system will get via Civica pay)
5. As a **tenant**, I would like to view my statement
6. As a **user**, I would like to export my statement quarterly or yearly either in csv format or pdf format
7. As a **user**, I would like to export selected statement in csv format
8. As a **user**, I would like to export my statement using date range in csv format
9. Being **finance user**, I want to get a full report on the finances (paid, charged etc)
10. As a **developer**, I want to:

* built and reuse a single Transactions microservice so that development efforts can be focused on other requirements.
* Ensure data updated, retrieved and inserted is consistent across services and reliable.
* Have an easy way to retrieve any data related to transactions so that I don’t need to make additional calls to find references for related systems.
* Able to search transaction from elasticsearch database

1. As a housing income officer, i would like to see all suspense transactions and then find the related account and update the account balance and change the suspense transaction status as resolved
   1. For this scenario there are two step
      1. After finding the appropriate account the information going to be confirmed by housing officer (some person with confirmation permission under the user management system) and send the notification to another responsible person
      2. The final person is going to approve or reject the progress - if the confirmation is approved in this state the suspense transaction is going to be flagged as resolved.

## Data Meetup Outcome

* Financial Transactions workshop

https://ideaflip.com/b/77yb727wfnpp/

## Endpoints to be created

1. **GET: api/v1/transactions?targetId={X}&transactionType={X}**[**&startDate={X}&endDate**](https://virtserver.swaggerhub.com/SandipChandra/FinancialTransactionApi/1.0.0/transactions/summary?targetId=ed9fea2e-9f1c-4b4b-962e-cb8b03928f1b&transactionType=tenancy&startDate=2021-03-01&endDate=2021-07-01)**={X}**

Gets a collection of transactions for a tenancy/property based on start date and end date range.

#### [GET: api/v1/transactions/{id}](#_mo3fk53jdr5u)

Get a transaction by provided id

#### [GET: api/v1/search/transactions?searchText={searchText} &pageSize={pageSize}&page={page}](#_mo3fk53jdr5u)

Get all transaction from elasticsearch base on the search text

#### [GET:api/v1/search/suspense-transactions?page={X}&pageSize={X}&searchText={X}](#_mo3fk53jdr5u)

Getting a list of paged suspense transactions which resulted from some search text.

#### [POST: api/v1//transactions](#_1wipl59ermin)

Inserts one or more transactions records

#### [POST /transactions/process-weekly-charge](#_1wipl59ermin)

Create a list of new transaction records which works as a batch processing. The Caller is a Weekly scheduled transaction job which reads the weekly charges from Charges table and applies charges in the Transaction entity.

#### [PATCH: api/v1/suspense-transactions/{id}](#_ncgr6ibwwsq)

This endpoint will be used to partial update the resolution information about the suspense transaction.

8.**POST**​/api​/v1​/transactions​/statement​/export

This endpoint will be used to export quarterly/yearly reports in csv or pdf format.

**9. POST**​/api​/v1​/transactions​/selection​/export

This endpoint will be used to export selected reports using ids or date range in csv or pdf format.

## Properties/Column Mappings

The following db columns have been identified as the ones from UH that will be replaced. Others have been identified as not used nor needed.

| **Transaction** | | | |
| --- | --- | --- | --- |
| **Name** | **Type** | **UH Column Name** | **New DB Column** |
| Id | GUID |  | id |
| TargetType | String |  | target\_type |
| TargetId | GUID |  | target\_id |
| PeriodNo | Number |  | period\_no |
| FinancialYear | Number |  | financial\_year |
| FinancialMonth | Number |  | financial\_month |
| TransactionSource | String |  | transaction\_source |
| TransactionType | String [Rent,Charge] |  | transaction\_type |
| TransactionDate | DateTime |  | transaction\_date |
| TransactionAmount | Number |  | transaction\_amount |
| PaymentReference | String |  | payment\_reference |
| BankAccountNumber | String |  | bank\_account\_number |
| IsSuspense | Boolean |  | is\_suspense |
| SuspenseResolutionInfo | SuspenseResolutionInfo |  | suspense\_resolution\_nfo |
| PaidAmount | Number |  | paid\_amount |
| ChargedAmount | Number |  | charged\_amount |
| BalanceAmount | Number |  | balance\_amount |
| HousingBenefitAmount | Number |  | housing\_benefit\_amount |
| Person | Person |  | person |
| Address | String | N/A | address |
| Fund | String |  | fund |

| **SuspenseResolutionInfo - Subset** | | | |
| --- | --- | --- | --- |
| **Name** | **Type** | **UH Column Name** | **Description** |
| TransferDate | DateTime | N/A | The date of transfer |
| Transmitter | String | N/A | Who did this transfer |
| TransmitterRole | String | N/A | The role of the transmitter |
| ConfirmedDate | DateTime | N/A | The date of transfer confirmation |
| Verifier | String | N/A | Who confirm the transfer |
| VerifierRole | String | N/A | The role of the verifier |
| ConfirmationNote | String | N/A | Confirmation or verification note |
| ApprovedDate | DateTime | N/A | The date of approval or authorization |
| Authorizer | String | N/A | Who authorize the transfer |
| AuthorizerRole | String | N/A | The role of the authorizer |
| AuthorizationNote | String | N/A | Authorization note |
| IsResolve | Boolean | N/A | Depend to the confirmation and approval status, Indicates the final status of the transfer |
| IsConfirmed | Boolean | N/A | Indicates the confirmation status |
| IsApproved | Boolean | N/A | Indicates the authorization status |

| **Person - Subset** | | | |
| --- | --- | --- | --- |
| **Name** | **Type** | **UH Column Name** | **New DB Column** |
| Id | GUID | N/A |  |
| FullName | String | N/A |  |

File export format for both csv and pdf

| Date | TransactionDetail | Debit | Credit | Balance |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

## Payloads

#### [Response Payload](#_gbuv2p1ncmwq)

[{

"id": "d6fd20f8-6483-4804-837d-b19114729340",

"targetType": "Asset",

"targetId": "74c5fbc4-2fc8-40dc-896a-0cfa67fc183e",

"periodNo": 2,

"financialYear": 2020,

"financialMonth": 1,

"transactionSource": "DD",

"transactionType": "Rent",

"transactionDate": "2021-04-27T23:00:00.000Z",

"transactionAmount": 87.53,

"paymentReference": "217005",

"bankAccountNumber": "\*\*\*\*\*\*78",

"isSuspense": false,

"suspenseResolutionInfo": {

"resolutionDate": "2021-04-27T23:00:00.000Z",

"isConfirmed": true,

"isApproved": true,

"isResolve": true,

"note": "string"

},

"paidAmount": 785.11,

"chargedAmount": 1243.89,

"balanceAmount": 785.56,

"housingBenefitAmount": 785.71,

"address": "15 Macron Court, Amhurst Rd, Hackney, London, E8 1ND",

"person": {

"id": "b43114b1-50e1-43fc-9cdb-0bbbc1892ce9",

"fullName": "Kian Hayward"

},

"fund": "HSGSUN"

}]

#### Request Payload/s

[{

"id": "d6fd20f8-6483-4804-837d-b19114729340",

"targetType": "Asset",

"targetId": "74c5fbc4-2fc8-40dc-896a-0cfa67fc183e",

"periodNo": 2,

"financialYear": 2020,

"financialMonth": 1,

"transactionSource": "DD",

"transactionType": "Rent",

"transactionDate": "2021-04-27T23:00:00.000Z",

"transactionAmount": 87.53,

"paymentReference": "217005",

"bankAccountNumber": "\*\*\*\*\*\*78",

"isSuspense": false,

"paidAmount": 785.11,

"chargedAmount": 1243.89,

"balanceAmount": 785.56,

"housingBenefitAmount": 785.71,

"address": "15 Macron Court, Amhurst Rd, Hackney, London, E8 1ND",

"person": {

"id": "b43114b1-50e1-43fc-9cdb-0bbbc1892ce9",

"fullName": "Kian Hayward"

},

"fund": "HSGSUN"  
}]

#### [Patch Payload](#_bohfj4fxajuv)

{

"targetType": "Asset",

"targetId": "74c5fbc4-2fc8-40dc-896a-0cfa67fc183e",

"isSuspense": true,

"suspenseResolutionInfo": {

"resolutionDate": "2021-04-27T23:00:00.000Z",

"isConfirmed": true,

"isApproved": true,

"isResolve": true,

"note": "string"

}

}

## Swagger Hub Link

<https://app.swaggerhub.com/apis-docs/Hackney/FinancialTransaction/1.0.0>

## Dependent Entities

## Model Payload for Get All Transaction

Can we have a single record per property/garage and payload in the lines of:

{

"id": "a3ef11f1-b04e-42b2-ba0a-17a70a33f918",

"targetId": "74c5fbc4-2fc8-40dc-896a-0cfa67fc183e",

“targetType”: “tenure”

"PeriodNo": 1, **// This will be WeekNo for Rent and PeriodNo for LH**

"financialYear": 2022,

“financialMonth” : 1, **// This will be fetched from the TransationDate for a faster querying purposes**

"transactionSource": "DD",

"transactionType": "rent",

"transactionDate": "2021-04-27T23:00:00.000Z",

"transactionAmount": 56.78,

"paymentReference": "", **// This is same as the Rent Account Number**

**“bankAccountNumber” : “\*\*\*\*\*\*78”,**

"isSuspense": false,

"suspenseInfo": {

"resolutionDate": "2021-04-27T23:00:00.000Z",

“isConfirmed”:true,

“isApproved”:true,

“isResolved”:true

"note" : "string"

},

"paidAmount": 56.78,**// Total Paid AMount**

"chargedAmount": 87.53,

"balanceAmount": 1025,

"housingBenefitAmount": 25.56, **// Housing Benefit Contribution**

"assetFullAddress":"Apartment 22, 18 G road, SW11"

}

**POST /transactions/process-weekly-charge**

Request Object Sample:

{

“targetId”:”f1113c51-b6ae-4c1b-9623-c31487c90340”

“targetType”: “tenure”

“periodNo”: 20, // week number starting from first monday of April

“financialYear”: 2021,

“financialMonth”: 9,

“transactionSource”:”WeeklyServiceCharge-Block Cleaning”,

“transactionType”:”Rent / Charge”,

“transactionDate”:”29-09-2021 16:36:55”,

“transactionAmount”:10,

“isSuspense”: false,

“chargedAmount”:10

}

**Response Payload Sample**

[

{

"targetId": "94b02545-0233-4640-98dd-b2900423c0a5",

“targetType”: “tenure”

"periodNo": 2,

"transactionSource": "DD",

"transactionType": 0,

"transactionDate": "2021-04-28T04:30:00.0000000+05:30",

"transactionAmount": 56.78,

"paymentReference": "216704",

"bankAccountNumber": "\*\*\*\*\*\*78",

"isSuspense": true,

"paidAmount": 56.78,

"chargedAmount": 87.53,

"balanceAmount": 1025,

"housingBenefitAmount": 25.56,

"address": "Apartment 22, 18 G road, SW11",

"person": {

"id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",

"fullName": "string"

},

"fund": "HSGSUN"

}

]

## 

## Appendix

## **Transactions:**

| **CODE** | **DESCRIPTION** |
| --- | --- |
| D20 | Section 20 Rebate |
| D25 | Section 125 Rebate |
| DAT | Assignment SC Trans |
| DBR | Basic Rent (No VAT) |
| DBT | MW Balance Transfer |
| DC1 | C Preliminaries |
| DC2 | C Provisional Sums |
| DC3 | C Contingency Sums |
| DC4 | C Professional Fees |
| DC5 | C Administration |
| DCB | Cleaning (Block) |
| DCC | Court Costs |
| DCE | Cleaning (Estate) |
| DCI | Contents Insurance |
| DCO | Concierge |
| DCP | CarPort |
| DCT | Communal Digital TV |
| DGA | Garage (Attached) |
| DGM | Grounds Maintenance |
| DGR | Ground Rent |
| DHA | Host Amenity |
| DHE | Heating |
| DHM | Heating Maintenance |
| DHW | Hot Water |
| DIN | Interest |
| DIT | Arrangement Interest |
| DKF | Lost Key Fobs |
| DLD | \Legacy Debit |
| DLK | Lost Key Charge |
| DLL | Landlord Lighting |
| DLP | Late Payment Charge |
| DMC | Major Works Capital |
| DMF | TA Management Fee |
| DMJ | MW Judgement Trans |
| DML | Major Works Loan |
| DMR | Major Works Revenue |
| DPP | Parking Permits |
| DPY | Parking Annual Chg |
| DR1 | R Preliminaries |
| DR2 | R Provisional Sums |
| DR3 | R Contingency Sums |
| DR4 | R Professional Fees |
| DR5 | R Administration Fee |
| DRP | Rechg Repairs no VAT |
| DRR | Rechargeable Repairs |
| DSA | SC Adjustment |
| DSB | SC Balancing Charge |
| DSC | Service Charges |
| DSJ | SC Judgement Debit |
| DSO | Shared Owners Rent |
| DSR | Reserve Fund |
| DST | Storage |
| DTA | Basic Rent Temp Acc |
| DTC | Travellers Charge |
| DTL | Tenants Levy |
| DTV | Television License |
| DVA | VAT Charge |
| DWR | Water Rates |
| DWS | Water Standing Chrg. |
| DWW | Watersure Reduction |
| RBA | Bailiff Payment |
| RBP | Bank Payment |
| RBR | PayPoint/Post Office |
| RCI | Rep. Cash Incentive |
| RCO | Cash Office Payments |
| RCP | Debit / Credit Card |
| RCT | MW Credit Transfer |
| RDD | Direct Debit |
| RDN | Direct Debit Unpaid |
| RDP | Deduction (Work & P) |
| RDR | BACS Refund |
| RDS | Deduction (Salary) |
| RDT | DSS Transfer |
| REF | Tenant Refund |
| RHA | HB Adjustment |
| RHB | Housing Benefit |
| RIT | Internal Transfer |
| RML | MW Loan Payment |
| ROB | \Opening Balance |
| RPD | Prompt Pay. Discount |
| RPO | Postal Order |
| RPY | PayPoint/Post Office |
| RQP | Cheque Payments |
| RRC | Returned Cheque |
| RRP | Recharge Rep. Credit |
| RSJ | SC Judgement Trans |
| RSO | Standing Order |
| RTM | TMO Reversal |
| RUC | Universal Credit Rec |
| RWA | Rent waiver |
| WOF | Write Off |
| WON | Write On |