[5-3. 운영사업비 모델링]

In [3]:
```
import pandas as pd
from pandas import DataFrame, Series
import cafle
from cafle import Index, Account
from cafle import Setattr
```

In [4]:
```
from practice.astn0_overview import overview, idx
from practice.astn1_sales import sales
```

1. Cost Account 설정

In [5]:
```
cost = Account(idx)
```

1) 토지비 가정

In [6]:
```
cost.토지비 = cost.subacc('토지비')
with cost.토지비 as 토지비:
    토지비.토지매입가액 = 토지비.subacc('토지매입가액')
    with 토지비.토지매입가액 as c:
        c.대지면적 = overview['area']['대지면적']['평']
        c.평단가 = 45 #백만원/평
        c.amt = c.대지면적 * c.평단가
        c.addscd(idx.loan[0], c.amt)

    토지비.취득세 = 토지비.subacc('취득세')
    with 토지비.취득세 as c:
        c.취득세율 = 0.046
        c.과세표준 = 토지비.토지매입가액.amt
        c.amt = round(c.과세표준 * c.취득세율)
        c.addscd(idx.loan[0], c.amt)

    토지비.중개수수료 = 토지비.subacc('중개수수료')
    with 토지비.중개수수료 as c:
        c.수수료율 = 0.01
        c.취득가액 = 토지비.토지매입가액.amt
        c.amt = round(c.취득가액 * c.수수료율)
        c.addscd(idx.loan[0], c.amt)

    토지비.부수비용 = 토지비.subacc('부수비용')
    with 토지비.부수비용 as c:
        c.적용비율 = 0.003
        c.취득가액 = 토지비.토지매입가액.amt
        c.amt = round(c.취득가액 * c.적용비율)
        c.addscd(idx.loan[0], c.amt)

    토지비.amtlst = Series(
        {key: val.amt for key, val in 토지비.dct.items()}
    )
    토지비.amt = 토지비.amtlst.sum()

    토지비.smry = {
        key: {
            subkey: getattr(subacc, subkey) for subkey in
                [var for var in subacc.vars if var not in ['index',
'name']]
        }
        for key, subacc in 토지비.dct.items()
    }
```

In [7]:
```
cost.토지비
```

Out[7]:
```
Account(토지비, len 30, dct: ['토지매입가액', '취득세', '중개수수료', '부수비
용'])
```

In [8]:
```
cost.토지비.토지매입가액.amt
```

Out[8]: 20430

In [9]:
```
cost.토지비.토지매입가액.dfall
```

Out[9]:

	scd_in	scd_in_cum	scd_out	scd_out_cum	bal_strt	amt_in	amt_in_cum	amt_out
2023-01-31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-02-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-03-31	20430.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-04-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-05-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-06-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-07-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-08-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-09-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-10-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-11-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-12-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-01-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-02-29	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-03-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-04-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-05-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-06-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0

2024-07-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-08-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-09-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-10-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-11-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-12-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-01-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-02-28	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-03-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-04-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-05-31	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-06-30	0.0	20430.0	0.0	0.0	0.0	0.0	0.0	0.0

In [10]:
```
cost.토지비.amt
```

Out[10]:
```
21635
```

In [11]:
```
cost.토지비.amtlst
```

Out[11]:
```
토지매입가액    20430
취득세           940
중개수수료       204
부수비용          61
dtype: int64
```

In [12]:
```
cost.토지비.smry
```

Out[12]:
```
{'토지매입가액': {'대지면적': 454, '평단가': 45, 'amt': 20430},
 '취득세': {'취득세율': 0.046, '과세표준': 20430, 'amt': 940},
 '중개수수료': {'수수료율': 0.01, '취득가액': 20430, 'amt': 204},
 '부수비용': {'적용비율': 0.003, '취득가액': 20430, 'amt': 61}}
```

In [ ]:
```

```

2) Cost setting 함수 만들기

In [13]:
```
def costsetting(cst):
    cst.amtlst = Series(
        {key: val.amt for key, val in cst.dct.items()}
    )
    cst.amt = cst.amtlst.sum()
    cst.smry = {
        key: {
            subkey: getattr(subacc, subkey) for subkey in
                [var for var in subacc.vars if var not in ['index',
'name']]
        }
        for key, subacc in cst.dct.items()
    }
```

In [14]:
```
cost.토지비 = cost.subacc('토지비')
with cost.토지비 as 토지비:
    토지비.토지매입가액 = 토지비.subacc('토지매입가액')
    with 토지비.토지매입가액 as c:
        c.대지면적 = overview['area']['대지면적']['평']
        c.평단가 = 45#백만원/평
        c.amt = c.대지면적 * c.평단가
        c.addscd(idx.loan[0], c.amt)

    토지비.취득세 = 토지비.subacc('취득세')
    with 토지비.취득세 as c:
        c.취득세율 = 0.046
        c.과세표준 = 토지비.토지매입가액.amt
        c.amt = round(c.과세표준 * c.취득세율)
        c.addscd(idx.loan[0], c.amt)

    토지비.중개수수료 = 토지비.subacc('중개수수료')
    with 토지비.중개수수료 as c:
        c.수수료율 = 0.01
        c.취득가액 = 토지비.토지매입가액.amt
        c.amt = round(c.취득가액 * c.수수료율)
        c.addscd(idx.loan[0], c.amt)

    토지비.부수비용 = 토지비.subacc('부수비용')
    with 토지비.부수비용 as c:
        c.적용비율 = 0.003
        c.취득가액 = 토지비.토지매입가액.amt
        c.amt = round(c.취득가액 * c.적용비율)
        c.addscd(idx.loan[0], c.amt)

    costsetting(토지비)
```

In [15]:
```
cost.토지비.amtlst
```

Out[15]:
```
토지매입가액     20430
취득세            940
중개수수료         204
부수비용           61
dtype: int64
```

In [16]:
```
cost.토지비.smry
```

Out[16]:
```
{'토지매입가액': {'대지면적': 454, '평단가': 45, 'amt': 20430},
 '취득세': {'취득세율': 0.046, '과세표준': 20430, 'amt': 940},
 '중개수수료': {'수수료율': 0.01, '취득가액': 20430, 'amt': 204},
 '부수비용': {'적용비율': 0.003, '취득가액': 20430, 'amt': 61}}
```

In [17]:
```
cost.토지비.amt
```

Out[17]:
```
21635
```

In [ ]:
```

```

3) 공사비 가정

(1) 철거비 설정

In [18]:
```
cost.공사비 = cost.subacc('공사비')
with cost.공사비 as 공사비:
    공사비.철거비 = 공사비.subacc('철거비')
    with 공사비.철거비 as c:
        c.기존건물면적 = 700#평
        c.철거단가 = 0.3#백만원/평
        c.amt = c.기존건물면적 * c.철거단가
        c.addscd(idx.cstrn[0], c.amt)
```

(2) 표준공정률에서 본건 공정률 추출

In [20]:
```
stdprc = pd.read_excel('data/standard_process_rate.xlsx') # "openpyxl"을 설치해야 할 수 있음 "pip install openpyxl"
stdprc
```

Out[20]:

	M	1	2	3	4	5	6	7	8	9	10	11	12	
0	1	1.0	0.287	0.160	0.096	0.069	0.057	0.050	0.044	0.039	0.034	0.029	0.026	0.
1	2	NaN	0.713	0.374	0.191	0.140	0.103	0.072	0.052	0.041	0.035	0.033	0.031	0.

2	3	NaN	NaN	0.466	0.404	0.206	0.127	0.108	0.095	0.080	0.064	0.050	0.039	0.
3	4	NaN	NaN	NaN	0.309	0.363	0.247	0.141	0.096	0.081	0.076	0.071	0.064	0.
4	5	NaN	NaN	NaN	NaN	0.222	0.298	0.254	0.171	0.109	0.078	0.065	0.061	0.
5	6	NaN	NaN	NaN	NaN	NaN	0.168	0.243	0.233	0.184	0.128	0.089	0.066	0.
6	7	NaN	NaN	NaN	NaN	NaN	NaN	0.132	0.203	0.206	0.183	0.141	0.102	0.
7	8	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0.106	0.173	0.180	0.172	0.145	0.
8	9	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0.087	0.149	0.158	0.157	0.
9	10	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0.073	0.131	0.141	0.
10	11	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0.061	0.115	0.
11	12	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0.053	0.
12	13	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	0.
13	14	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
14	15	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
15	16	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
16	17	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
17	18	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
18	19	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
19	20	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
20	21	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
21	22	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
22	23	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
23	24	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
24	25	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
25	26	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
26	27	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
27	28	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
28	29	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
29	30	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
30	31	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
31	32	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
32	33	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
33	34	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
34	35	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
35	36	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I

36	37	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
37	38	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
38	39	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
39	40	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
40	41	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
41	42	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
42	43	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
43	44	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
44	45	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
45	46	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
46	47	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I
47	48	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	I

In [21]:
```
lencstrn = len(idx.cstrn)
cstrnprc = stdprc[lencstrn][:lencstrn]
cstrnprc.index = idx.cstrn
cstrnprc._name = '공정률'
cstrnprc
```

Out[21]:
```
2023-04-30    0.011
2023-05-31    0.015
2023-06-30    0.018
2023-07-31    0.013
2023-08-31    0.016
2023-09-30    0.023
2023-10-31    0.030
2023-11-30    0.034
2023-12-31    0.031
2024-01-31    0.030
2024-02-29    0.030
2024-03-31    0.036
2024-04-30    0.045
2024-05-31    0.057
2024-06-30    0.069
2024-07-31    0.076
2024-08-31    0.080
2024-09-30    0.077
2024-10-31    0.073
2024-11-30    0.068
2024-12-31    0.062
2025-01-31    0.053
2025-02-28    0.039
2025-03-31    0.014
Name: 공정률, dtype: float64
```

(3) 건축비 설정

In [22]:
```
with cost.공사비 as 공사비:
    공사비.건축비 = 공사비.subacc('건축비')
    with 공사비.건축비 as c:
        c.공사단가 = 5.50#백만원
        c.연면적 = overview['area']['연면적']['평']
        c.amt = c.공사단가 * c.연면적
        c.공정률표 = DataFrame(cstrnprc)
        c.공정률표['공정금액'] = c.공정률표['공정률'] * c.amt
        c.addscd(idx.cstrn, c.공정률표['공정금액'])
```

In [23]:
```
cost.공사비.건축비.공정률표
```

Out[23]:

	공정률	공정금액
2023-04-30	0.011	237.9465
2023-05-31	0.015	324.4725
2023-06-30	0.018	389.3670
2023-07-31	0.013	281.2095
2023-08-31	0.016	346.1040
2023-09-30	0.023	497.5245
2023-10-31	0.030	648.9450
2023-11-30	0.034	735.4710
2023-12-31	0.031	670.5765
2024-01-31	0.030	648.9450
2024-02-29	0.030	648.9450
2024-03-31	0.036	778.7340
2024-04-30	0.045	973.4175
2024-05-31	0.057	1232.9955
2024-06-30	0.069	1492.5735
2024-07-31	0.076	1643.9940
2024-08-31	0.080	1730.5200
2024-09-30	0.077	1665.6255
2024-10-31	0.073	1579.0995
2024-11-30	0.068	1470.9420
2024-12-31	0.062	1341.1530
2025-01-31	0.053	1146.4695
2025-02-28	0.039	843.6285
2025-03-31	0.014	302.8410

In [24]:
```
cost.공사비.건축비.dfall
```

Out[24]:

	scd_in	scd_in_cum	scd_out	scd_out_cum	bal_strt	amt_in	amt_in_cum	amt_o
2023-01-31	0.0000	0.0000	0.0	0.0	0.0	0.0	0.0	0
2023-02-28	0.0000	0.0000	0.0	0.0	0.0	0.0	0.0	0
2023-03-31	0.0000	0.0000	0.0	0.0	0.0	0.0	0.0	0

2023-04-30	237.9465	237.9465	0.0	0.0	0.0	0.0	0.0	0
2023-05-31	324.4725	562.4190	0.0	0.0	0.0	0.0	0.0	0
2023-06-30	389.3670	951.7860	0.0	0.0	0.0	0.0	0.0	0
2023-07-31	281.2095	1232.9955	0.0	0.0	0.0	0.0	0.0	0
2023-08-31	346.1040	1579.0995	0.0	0.0	0.0	0.0	0.0	0
2023-09-30	497.5245	2076.6240	0.0	0.0	0.0	0.0	0.0	0
2023-10-31	648.9450	2725.5690	0.0	0.0	0.0	0.0	0.0	0
2023-11-30	735.4710	3461.0400	0.0	0.0	0.0	0.0	0.0	0
2023-12-31	670.5765	4131.6165	0.0	0.0	0.0	0.0	0.0	0
2024-01-31	648.9450	4780.5615	0.0	0.0	0.0	0.0	0.0	0
2024-02-29	648.9450	5429.5065	0.0	0.0	0.0	0.0	0.0	0
2024-03-31	778.7340	6208.2405	0.0	0.0	0.0	0.0	0.0	0
2024-04-30	973.4175	7181.6580	0.0	0.0	0.0	0.0	0.0	0
2024-05-31	1232.9955	8414.6535	0.0	0.0	0.0	0.0	0.0	0
2024-06-30	1492.5735	9907.2270	0.0	0.0	0.0	0.0	0.0	0
2024-07-31	1643.9940	11551.2210	0.0	0.0	0.0	0.0	0.0	0
2024-08-31	1730.5200	13281.7410	0.0	0.0	0.0	0.0	0.0	0
2024-09-30	1665.6255	14947.3665	0.0	0.0	0.0	0.0	0.0	0
2024-10-31	1579.0995	16526.4660	0.0	0.0	0.0	0.0	0.0	0
2024-11-30	1470.9420	17997.4080	0.0	0.0	0.0	0.0	0.0	0
2024-12-31	1341.1530	19338.5610	0.0	0.0	0.0	0.0	0.0	0
2025-01-31	1146.4695	20485.0305	0.0	0.0	0.0	0.0	0.0	0

2025-02-28	843.6285	21328.6590	0.0	0.0	0.0	0.0	0.0	0
2025-03-31	302.8410	21631.5000	0.0	0.0	0.0	0.0	0.0	0
2025-04-30	0.0000	21631.5000	0.0	0.0	0.0	0.0	0.0	0
2025-05-31	0.0000	21631.5000	0.0	0.0	0.0	0.0	0.0	0
2025-06-30	0.0000	21631.5000	0.0	0.0	0.0	0.0	0.0	0

In [25]:
```
cost.공사비.건축비.amt
```

Out[25]:
```
21631.5
```

In [26]:
```
cost.공사비.건축비.vars
```

Out[26]:
```
['index', 'name', '공사단가', '연면적', 'amt', '공정률표']
```

(4) 인입비 설정

In [27]:
```
with cost.공사비 as 공사비:
    공사비.인입비 = 공사비.subacc('인입비')
    with 공사비.인입비 as c:
        c.적용비율 = 0.035#백만원
        c.연면적 = overview['area']['연면적']['평']
        c.amt = c.적용비율 * c.연면적
        c.addscd(idx.cstrn[0], c.amt)

    costsetting(공사비)
```

In [28]:
```
cost.공사비.smry
```

Out[28]:
```
{'철거비': {'기존건물면적': 700, '철거단가': 0.3, 'amt': 210.0},
 '건축비': {'공사단가': 5.5,
  '연면적': 3933,
  'amt': 21631.5,
  '공정률표':                공정률        공정금액
  2023-04-30  0.011   237.9465
  2023-05-31  0.015   324.4725
  2023-06-30  0.018   389.3670
  2023-07-31  0.013   281.2095
  2023-08-31  0.016   346.1040
  2023-09-30  0.023   497.5245
  2023-10-31  0.030   648.9450
  2023-11-30  0.034   735.4710
  2023-12-31  0.031   670.5765
  2024-01-31  0.030   648.9450
  2024-02-29  0.030   648.9450
  2024-03-31  0.036   778.7340
  2024-04-30  0.045   973.4175
  2024-05-31  0.057  1232.9955
  2024-06-30  0.069  1492.5735
  2024-07-31  0.076  1643.9940
  2024-08-31  0.080  1730.5200
  2024-09-30  0.077  1665.6255
  2024-10-31  0.073  1579.0995
  2024-11-30  0.068  1470.9420
  2024-12-31  0.062  1341.1530
  2025-01-31  0.053  1146.4695
  2025-02-28  0.039   843.6285
  2025-03-31  0.014   302.8410},
 '인입비': {'적용비율': 0.035, '연면적': 3933, 'amt': 137.655}}
```

In [29]:
```
cost.공사비.amtlst
```

Out[29]:
```
철거비      210.000
건축비    21631.500
인입비      137.655
dtype: float64
```

In [30]:
```
cost.공사비.amt
```

Out[30]:
```
21979.155
```

In [ ]:
```

```

4) 간접공사비 가정

In [31]:
```
cost.간접공사비 = cost.subacc('간접공사비')
with cost.간접공사비 as 간접공사비:
    간접공사비.설계비 = 간접공사비.subacc('설계비')
    with 간접공사비.설계비 as c:
        c.적용단가 = 0.10#백만원/평
        c.연면적 = overview['area']['연면적']['평']
        c.amt = c.적용단가 * c.연면적
        c.addscd(idx.cstrn[0], c.amt)

    간접공사비.감리비 = 간접공사비.subacc('감리비')
    with 간접공사비.감리비 as c:
        c.월단가 = 15.0#백만원/월
        c.amt = c.월단가 * len(idx.cstrn)
        c.addscd(idx.cstrn, [c.월단가] * len(idx.cstrn))

    간접공사비.인허가등 = 간접공사비.subacc('인허가등')
    with 간접공사비.인허가등 as c:
        c.amt = 300.0#백만원
        c.addscd(idx.loan[0], c.amt)

    costsetting(간접공사비)
```

In [32]:
```
cost.간접공사비.smry
```

Out[32]:
```
{'설계비': {'적용단가': 0.1, '연면적': 3933, 'amt': 393.3},
 '감리비': {'월단가': 15.0, 'amt': 360.0},
 '인허가등': {'amt': 300.0}}
```

In [33]:
```
cost.간접공사비.amtlst
```

Out[33]:
```
설계비      393.3
감리비      360.0
인허가등     300.0
dtype: float64
```

In [34]:
```
cost.간접공사비.amt
```

Out[34]:
```
1053.3
```

In [ ]:
```

```

5) 판매비 가정

In [35]:
```
cost.판매비 = cost.subacc('판매비')
with cost.판매비 as 판매비:
    판매비.MH운영비 = 판매비.subacc('MH운영비')
    with 판매비.MH운영비 as c:
        c.월단가 = 60#백만원/월
        c.amt = c.월단가 * len(idx.sales)
        c.addscd(idx.sales, [c.월단가] * len(idx.sales))

    판매비.광고비 = 판매비.subacc('광고비')
    with 판매비.광고비 as c:
        c.분양매출 = sales.분양매출['합계']
        c.적용비율 = 0.015
        c.amt = c.분양매출 * c.적용비율
        c.월단가 = c.amt / len(idx.sales)
        c.addscd(idx.sales, [c.월단가] * len(idx.sales))

    판매비.분양수수료 = 판매비.subacc('분양수수료')
    with 판매비.분양수수료 as c:
        c.수수료율_오피 = 0.05
        c.수수료율_근생 = 0.08
        c.분양가정테이블 = sales.분양률가정.copy() #deep copy
        c.분양가정테이블['수수료오피'] = c.분양가정테이블['계약오피'] * c.수수료율
_오피
        c.분양가정테이블['수수료근생'] = c.분양가정테이블['계약근생'] * c.수수료율
_근생
        c.수수료_오피 = c.분양가정테이블['수수료오피'].sum()
        c.수수료_근생 = c.분양가정테이블['수수료근생'].sum()
        c.amt = c.수수료_오피 + c.수수료_근생
        c.addscd(c.분양가정테이블.index, c.분양가정테이블['수수료오피'])
        c.addscd(c.분양가정테이블.index, c.분양가정테이블['수수료근생'])

    costsetting(판매비)
```

In [36]:
```
cost.판매비.분양수수료.dfall
```

Out[36]:

	scd_in	scd_in_cum	scd_out	scd_out_cum	bal_strt	amt_in	amt_in_cum	amt_out
2023-01-31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-02-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-03-31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-04-30	651.6	651.6	0.0	0.0	0.0	0.0	0.0	0.0
2023-05-31	0.0	651.6	0.0	0.0	0.0	0.0	0.0	0.0
2023-06-30	0.0	651.6	0.0	0.0	0.0	0.0	0.0	0.0

2023-07-31	0.0	651.6	0.0	0.0	0.0	0.0	0.0	0.0
2023-08-31	0.0	651.6	0.0	0.0	0.0	0.0	0.0	0.0
2023-09-30	0.0	651.6	0.0	0.0	0.0	0.0	0.0	0.0
2023-10-31	651.6	1303.2	0.0	0.0	0.0	0.0	0.0	0.0
2023-11-30	0.0	1303.2	0.0	0.0	0.0	0.0	0.0	0.0
2023-12-31	0.0	1303.2	0.0	0.0	0.0	0.0	0.0	0.0
2024-01-31	0.0	1303.2	0.0	0.0	0.0	0.0	0.0	0.0
2024-02-29	0.0	1303.2	0.0	0.0	0.0	0.0	0.0	0.0
2024-03-31	0.0	1303.2	0.0	0.0	0.0	0.0	0.0	0.0
2024-04-30	651.6	1954.8	0.0	0.0	0.0	0.0	0.0	0.0
2024-05-31	0.0	1954.8	0.0	0.0	0.0	0.0	0.0	0.0
2024-06-30	0.0	1954.8	0.0	0.0	0.0	0.0	0.0	0.0
2024-07-31	0.0	1954.8	0.0	0.0	0.0	0.0	0.0	0.0
2024-08-31	0.0	1954.8	0.0	0.0	0.0	0.0	0.0	0.0
2024-09-30	0.0	1954.8	0.0	0.0	0.0	0.0	0.0	0.0
2024-10-31	651.6	2606.4	0.0	0.0	0.0	0.0	0.0	0.0
2024-11-30	0.0	2606.4	0.0	0.0	0.0	0.0	0.0	0.0
2024-12-31	0.0	2606.4	0.0	0.0	0.0	0.0	0.0	0.0
2025-01-31	0.0	2606.4	0.0	0.0	0.0	0.0	0.0	0.0
2025-02-28	0.0	2606.4	0.0	0.0	0.0	0.0	0.0	0.0
2025-03-31	0.0	2606.4	0.0	0.0	0.0	0.0	0.0	0.0
2025-04-30	1099.6	3706.0	0.0	0.0	0.0	0.0	0.0	0.0

2025-05-31	0.0	3706.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-06-30	0.0	3706.0	0.0	0.0	0.0	0.0	0.0	0.0

In [37]:
```
cost.판매비.amt
```

Out[37]:
```
6267.4
```

In [38]:
```
cost.판매비.amtlst
```

Out[38]:
```
MH운영비     1500.0
광고비       1061.4
분양수수료     3706.0
dtype: float64
```

In [39]:
```
cost.판매비.smry
```

Out[39]:
```
{'MH운영비': {'월단가': 60, 'amt': 1500},
 '광고비': {'분양매출': 70760.0,
  '적용비율': 0.015,
  'amt': 1061.3999999999999,
  '월단가': 42.455999999999996},
 '분양수수료': {'수수료율_오피': 0.05,
  '수수료율_근생': 0.08,
  '분양가정테이블':                오피    근생      계약오피     계약근생      계약
소계   수수료오피  수수료근생
  2023-04-30  0.2  0.0  13032.0     0.0  13032.0  651.6    0.0
  2023-10-31  0.2  0.0  13032.0     0.0  13032.0  651.6    0.0
  2024-04-30  0.2  0.0  13032.0     0.0  13032.0  651.6    0.0
  2024-10-31  0.2  0.0  13032.0     0.0  13032.0  651.6    0.0
  2025-04-30  0.2  1.0  13032.0  5600.0  18632.0  651.6  448.0,
  '수수료_오피': 3258.0,
  '수수료_근생': 448.0,
  'amt': 3706.0}}
```

In [ ]:
```

```

6) 일반사업비 가정

In [40]:
```
cost.일반사업비 = cost.subacc('일반사업비')
with cost.일반사업비 as 일반사업비:
    일반사업비.신탁수수료 = 일반사업비.subacc('신탁수수료')
    with 일반사업비.신탁수수료 as c:
        c.분양매출 = sales.분양매출['합계']
        c.적용비율 = 0.02
        c.amt = c.분양매출 * c.적용비율
        c.addscd(idx.loan[0], c.amt)

    일반사업비.시행사운영비 = 일반사업비.subacc('시행사운영비')
    with 일반사업비.시행사운영비 as c:
        c.월단가 = 30.0#백만원
        c.amt = c.월단가 * len(idx.sales)
        c.addscd(idx.sales, c.월단가)

    일반사업비.금융조달비 = 일반사업비.subacc('금융조달비')
    with 일반사업비.금융조달비 as c:
        c.감정평가 = 50.0#백만원
        c.사업성평가 = 40.0#백만원
        c.법무법인 = 40.0#백만원
        c.법무사 = 10.0#백만원
        c.amt = c.감정평가 + c.사업성평가 + c.법무법인 + c.법무사
        c.addscd(idx.loan[0], c.amt)

    일반사업비.예비비 = 일반사업비.subacc('예비비')
    with 일반사업비.예비비 as c:
        c.분양매출 = sales.분양매출['합계']
        c.적용비율 = 0.01
        c.amt = c.분양매출 * c.적용비율
        c.월단가 = c.amt / len(idx.loan)
        c.addscd(idx.loan, c.월단가)

    costsetting(일반사업비)
```

In [41]:
```
cost.일반사업비.smry
```

Out[41]:
```
{'신탁수수료': {'분양매출': 70760.0, '적용비율': 0.02, 'amt': 1415.2},
 '시행사운영비': {'월단가': 30.0, 'amt': 750.0},
 '금융조달비': {'감정평가': 50.0,
  '사업성평가': 40.0,
  '법무법인': 40.0,
  '법무사': 10.0,
  'amt': 140.0},
 '예비비': {'분양매출': 70760.0,
  '적용비율': 0.01,
  'amt': 707.6,
  '월단가': 26.20740740740741}}
```

In [42]:
```
cost.일반사업비.amt
```

Out[42]:
```
3012.7999999999997
```

In [43]:
```
cost.일반사업비.amtlst
```

Out[43]:
```
신탁수수료      1415.2
시행사운영비     750.0
금융조달비       140.0
예비비          707.6
dtype: float64
```

In [ ]:
```

```

7) 제세공과금 가정

In [44]:
```
cost.제세공과금 = cost.subacc('제세공과금')
with cost.제세공과금 as 제세공과금:
    제세공과금.상하수원인자부담금 = 제세공과금.subacc('상하수원인자부담금')
    with 제세공과금.상하수원인자부담금 as c:
        c.amt = 155.0#백만원
        c.addscd(idx.cstrn[0], c.amt)

    제세공과금.보존등기비 = 제세공과금.subacc('보존등기비')
    with 제세공과금.보존등기비 as c:
        c.과세표준 = cost.공사비.amt + cost.간접공사비.amt + cost.일반사업비.
amt
        c.취득세 = c.과세표준 * 0.028       #2.80%
        c.지방교육세 = c.과세표준 * 0.0016  #0.16%
        c.농어촌특별세 = c.과세표준 * 0.0020 #0.20%
        c.amt = c.취득세 + c.지방교육세 + c.농어촌특별세
        c.addscd(idx.cstrn[-1], c.amt)

    costsetting(제세공과금)
```

In [45]:
```
cost.제세공과금.smry
```

Out[45]:
```
{'상하수원인자부담금': {'amt': 155.0},
 '보존등기비': {'과세표준': 26045.254999999997,
  '취득세': 729.2671399999999,
  '지방교육세': 41.672408,
  '농어촌특별세': 52.090509999999995,
  'amt': 823.0300579999999}}
```

In [46]:
```
cost.제세공과금.amtlst
```

Out[46]:
```
상하수원인자부담금     155.000000
보존등기비          823.030058
dtype: float64
```

In [47]:
```
cost.제세공과금.amt
```

Out[47]:
```
978.0300579999999
```

In [ ]:
```

```

2. Cost Account 함수 설정

1) 비용 추정 함수

- 매월 인출해야 할 한도대출금을 확정하기 위해서는 해당 월에 사용 예정된 사업비 금액을 추정해야 함.
- 사업비를 추정한 후 해당 금원만큼 한도대출금을 인출하고, 이후 인출된 금원으로 사업비를 지급함.

In [48]:
```
cost.mrg2.dfall
```

Out[48]:

	scd_in	scd_in_cum	scd_out	scd_out_cum	bal_strt	amt_in	amt_in_cum	a
2023-01-31	0.000000	0.000000	0.0	0.0	0.0	0.0	0.0	
2023-02-28	0.000000	0.000000	0.0	0.0	0.0	0.0	0.0	
2023-03-31	23516.407407	23516.407407	0.0	0.0	0.0	0.0	0.0	
2023-04-30	1959.164907	25475.572315	0.0	0.0	0.0	0.0	0.0	
2023-05-31	498.135907	25973.708222	0.0	0.0	0.0	0.0	0.0	
2023-06-30	563.030407	26536.738630	0.0	0.0	0.0	0.0	0.0	
2023-07-31	454.872907	26991.611537	0.0	0.0	0.0	0.0	0.0	
2023-08-31	519.767407	27511.378944	0.0	0.0	0.0	0.0	0.0	
2023-09-30	671.187907	28182.566852	0.0	0.0	0.0	0.0	0.0	
2023-10-31	1474.208407	29656.775259	0.0	0.0	0.0	0.0	0.0	
2023-11-30	909.134407	30565.909667	0.0	0.0	0.0	0.0	0.0	
2023-12-31	844.239907	31410.149574	0.0	0.0	0.0	0.0	0.0	

2024-01-31	822.608407	32232.757981	0.0	0.0	0.0	0.0	0.0
2024-02-29	822.608407	33055.366389	0.0	0.0	0.0	0.0	0.0
2024-03-31	952.397407	34007.763796	0.0	0.0	0.0	0.0	0.0
2024-04-30	1798.680907	35806.444704	0.0	0.0	0.0	0.0	0.0
2024-05-31	1406.658907	37213.103611	0.0	0.0	0.0	0.0	0.0
2024-06-30	1666.236907	38879.340519	0.0	0.0	0.0	0.0	0.0
2024-07-31	1817.657407	40696.997926	0.0	0.0	0.0	0.0	0.0
2024-08-31	1904.183407	42601.181333	0.0	0.0	0.0	0.0	0.0
2024-09-30	1839.288907	44440.470241	0.0	0.0	0.0	0.0	0.0
2024-10-31	2404.362907	46844.833148	0.0	0.0	0.0	0.0	0.0
2024-11-30	1644.605407	48489.438556	0.0	0.0	0.0	0.0	0.0
2024-12-31	1514.816407	50004.254963	0.0	0.0	0.0	0.0	0.0
2025-01-31	1320.132907	51324.387870	0.0	0.0	0.0	0.0	0.0
2025-02-28	1017.291907	52341.679778	0.0	0.0	0.0	0.0	0.0
2025-03-31	1299.534465	53641.214243	0.0	0.0	0.0	0.0	0.0
2025-04-30	1258.263407	54899.477651	0.0	0.0	0.0	0.0	0.0
2025-05-31	26.207407	54925.685058	0.0	0.0	0.0	0.0	0.0
2025-06-30	0.000000	54925.685058	0.0	0.0	0.0	0.0	0.0

In [49]:
```
@Setattr(cost)
def estimate_cost_amt(cost, idxno):
    cst = cost.mrg2
    return cst.scd_in[idxno]
```

In [50]:
```
cost.estimate_cost_amt(idx[2])
```

Out[50]: 23516.40740740741

In [51]:
```
cost.estimate_cost_amt(idx.loan[0])
```

Out[51]: 23516.40740740741

In [52]:
```
cost.estimate_cost_amt(idx.cstrn[0])
```

Out[52]: 1959.1649074074073

In [ ]:
```

```

2) 비용 지출 함수

- 운영계좌에서 개별 비용 Account에게 매월 지출 예정된 금원을 지출함.

In [53]:
```
@Setattr(cost)
def pay_cost_amt(cost, acc, idxno):
    amtttl = 0
    for key, item in cost.dct.items():
        for key2, item2 in item.dct.items():
            amt = item2.scd_in[idxno]
            acc.send(idxno, amt, item2, note=item2.name)
            amtttl += amt
    return amtttl
```

In [54]:
```
oprtg = Account(idx)
oprtg.addamt(idx[0], 10_000)
```

In [55]:
```
oprtg.df
```

Out[55]:

	bal_strt	amt_in	amt_out	bal_end
2023-01-31	0.0	10000.0	0.0	10000.0
2023-02-28	10000.0	0.0	0.0	10000.0
2023-03-31	10000.0	0.0	0.0	10000.0
2023-04-30	10000.0	0.0	0.0	10000.0
2023-05-31	10000.0	0.0	0.0	10000.0
2023-06-30	10000.0	0.0	0.0	10000.0
2023-07-31	10000.0	0.0	0.0	10000.0
2023-08-31	10000.0	0.0	0.0	10000.0
2023-09-30	10000.0	0.0	0.0	10000.0
2023-10-31	10000.0	0.0	0.0	10000.0
2023-11-30	10000.0	0.0	0.0	10000.0
2023-12-31	10000.0	0.0	0.0	10000.0
2024-01-31	10000.0	0.0	0.0	10000.0
2024-02-29	10000.0	0.0	0.0	10000.0
2024-03-31	10000.0	0.0	0.0	10000.0
2024-04-30	10000.0	0.0	0.0	10000.0
2024-05-31	10000.0	0.0	0.0	10000.0
2024-06-30	10000.0	0.0	0.0	10000.0
2024-07-31	10000.0	0.0	0.0	10000.0
2024-08-31	10000.0	0.0	0.0	10000.0
2024-09-30	10000.0	0.0	0.0	10000.0
2024-10-31	10000.0	0.0	0.0	10000.0
2024-11-30	10000.0	0.0	0.0	10000.0
2024-12-31	10000.0	0.0	0.0	10000.0
2025-01-31	10000.0	0.0	0.0	10000.0
2025-02-28	10000.0	0.0	0.0	10000.0
2025-03-31	10000.0	0.0	0.0	10000.0
2025-04-30	10000.0	0.0	0.0	10000.0
2025-05-31	10000.0	0.0	0.0	10000.0
2025-06-30	10000.0	0.0	0.0	10000.0

In [56]:
```
cost.pay_cost_amt(oprtg, idx[2])
```

Out[56]:
```
23516.40740740741
```

In [57]:
```
oprtg.df
```

Out[57]:

	bal_strt	amt_in	amt_out	bal_end
2023-01-31	0.000000	10000.0	0.000000	10000.000000
2023-02-28	10000.000000	0.0	0.000000	10000.000000
2023-03-31	10000.000000	0.0	23516.407407	-13516.407407
2023-04-30	-13516.407407	0.0	0.000000	-13516.407407
2023-05-31	-13516.407407	0.0	0.000000	-13516.407407
2023-06-30	-13516.407407	0.0	0.000000	-13516.407407
2023-07-31	-13516.407407	0.0	0.000000	-13516.407407
2023-08-31	-13516.407407	0.0	0.000000	-13516.407407
2023-09-30	-13516.407407	0.0	0.000000	-13516.407407
2023-10-31	-13516.407407	0.0	0.000000	-13516.407407
2023-11-30	-13516.407407	0.0	0.000000	-13516.407407
2023-12-31	-13516.407407	0.0	0.000000	-13516.407407
2024-01-31	-13516.407407	0.0	0.000000	-13516.407407
2024-02-29	-13516.407407	0.0	0.000000	-13516.407407
2024-03-31	-13516.407407	0.0	0.000000	-13516.407407
2024-04-30	-13516.407407	0.0	0.000000	-13516.407407
2024-05-31	-13516.407407	0.0	0.000000	-13516.407407
2024-06-30	-13516.407407	0.0	0.000000	-13516.407407
2024-07-31	-13516.407407	0.0	0.000000	-13516.407407
2024-08-31	-13516.407407	0.0	0.000000	-13516.407407
2024-09-30	-13516.407407	0.0	0.000000	-13516.407407
2024-10-31	-13516.407407	0.0	0.000000	-13516.407407
2024-11-30	-13516.407407	0.0	0.000000	-13516.407407
2024-12-31	-13516.407407	0.0	0.000000	-13516.407407
2025-01-31	-13516.407407	0.0	0.000000	-13516.407407
2025-02-28	-13516.407407	0.0	0.000000	-13516.407407
2025-03-31	-13516.407407	0.0	0.000000	-13516.407407
2025-04-30	-13516.407407	0.0	0.000000	-13516.407407
2025-05-31	-13516.407407	0.0	0.000000	-13516.407407
2025-06-30	-13516.407407	0.0	0.000000	-13516.407407

In [58]:
```
cost.mrg2.dfall
```

Out[58]:

Out[58]:

	scd_in	scd_in_cum	scd_out	scd_out_cum	bal_strt	amt_in	a
2023-01-31	0.000000	0.000000	0.0	0.0	0.000000	0.000000	
2023-02-28	0.000000	0.000000	0.0	0.0	0.000000	0.000000	
2023-03-31	23516.407407	23516.407407	0.0	0.0	0.000000	23516.407407	23
2023-04-30	1959.164907	25475.572315	0.0	0.0	23516.407407	0.000000	23
2023-05-31	498.135907	25973.708222	0.0	0.0	23516.407407	0.000000	23
2023-06-30	563.030407	26536.738630	0.0	0.0	23516.407407	0.000000	23
2023-07-31	454.872907	26991.611537	0.0	0.0	23516.407407	0.000000	23
2023-08-31	519.767407	27511.378944	0.0	0.0	23516.407407	0.000000	23
2023-09-30	671.187907	28182.566852	0.0	0.0	23516.407407	0.000000	23
2023-10-31	1474.208407	29656.775259	0.0	0.0	23516.407407	0.000000	23
2023-11-30	909.134407	30565.909667	0.0	0.0	23516.407407	0.000000	23
2023-12-31	844.239907	31410.149574	0.0	0.0	23516.407407	0.000000	23
2024-01-31	822.608407	32232.757981	0.0	0.0	23516.407407	0.000000	23
2024-02-29	822.608407	33055.366389	0.0	0.0	23516.407407	0.000000	23
2024-03-31	952.397407	34007.763796	0.0	0.0	23516.407407	0.000000	23
2024-04-30	1798.680907	35806.444704	0.0	0.0	23516.407407	0.000000	23
2024-05-31	1406.658907	37213.103611	0.0	0.0	23516.407407	0.000000	23
2024-06-30	1666.236907	38879.340519	0.0	0.0	23516.407407	0.000000	23
2024-07-31	1817.657407	40696.997926	0.0	0.0	23516.407407	0.000000	23
2024-08-31	1904.183407	42601.181333	0.0	0.0	23516.407407	0.000000	23
2024-09-30	1839.288907	44440.470241	0.0	0.0	23516.407407	0.000000	23

2024-10-31	2404.362907	46844.833148	0.0	0.0	23516.407407	0.000000	23
2024-11-30	1644.605407	48489.438556	0.0	0.0	23516.407407	0.000000	23
2024-12-31	1514.816407	50004.254963	0.0	0.0	23516.407407	0.000000	23
2025-01-31	1320.132907	51324.387870	0.0	0.0	23516.407407	0.000000	23
2025-02-28	1017.291907	52341.679778	0.0	0.0	23516.407407	0.000000	23
2025-03-31	1299.534465	53641.214243	0.0	0.0	23516.407407	0.000000	23
2025-04-30	1258.263407	54899.477651	0.0	0.0	23516.407407	0.000000	23
2025-05-31	26.207407	54925.685058	0.0	0.0	23516.407407	0.000000	23
2025-06-30	0.000000	54925.685058	0.0	0.0	23516.407407	0.000000	23

In [59]:
```
cost.토지비.토지매입가액.dfall
```

Out[59]:

	scd_in	scd_in_cum	scd_out	scd_out_cum	bal_strt	amt_in	amt_in_cum	amt_ou
2023-01-31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.(
2023-02-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.(
2023-03-31	20430.0	20430.0	0.0	0.0	0.0	20430.0	20430.0	0.(
2023-04-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-05-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-06-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-07-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-08-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-09-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-10-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.(
2023-								

11-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-12-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-01-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-02-29	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-03-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-04-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-05-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-06-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-07-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-08-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-09-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-10-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-11-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2024-12-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2025-01-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2025-02-28	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2025-03-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2025-04-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2025-05-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2025-06-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0

In [ ]: