

[5-3. 운영사업비 모델링]

```
In [1]: import pandas as pd
        from pandas import DataFrame, Series
        import cafle as cf
        from cafle import Index, Account
        from cafle import Setattr
```

```
In [2]: from practice.astn0_overview import overview, idx
        from practice.astn1_sales import sales
```

1. Cost Account 설정

```
In [3]: cost = Account(idx)
```

1) 토지비 가정

```

In [4]: 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 [5]: cost.토지비
```

```
Out[5]: Account(토지비, len 30, dct: ['토지매입가액', '취득세', '중개수수료', '부수비용'])
```

```
In [6]: cost.토지비.토지매입가액.amt
```

```
Out[6]: 20430
```

In [7]: `cost.토지비.토지매입가액.dfall`

Out[7]:

	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 [8]: `cost.토지비.amt`

Out[8]: 21635

In [9]: `cost.토지비.amt1st`

Out[9]: 토지매입가액 20430
 취득세 940
 중개수수료 204
 부수비용 61
 dtype: int64

In [10]: `cost.토지비.smry`

Out[10]: {'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 [11]: 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 [12]: 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 [13]: cost.토지비.amt1st
```

```
Out[13]: 토지매입가액      20430
         취득세          940
         중개수수료      204
         부수비용        61
         dtype: int64
```

```
In [14]: cost.토지비.smry
```

```
Out[14]: {'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 [15]: cost.토지비.amt
```

```
Out[15]: 21635
```

```
In [ ]:
```

3) 공사비 가정

(1) 철거비 설정

```
In [16]: 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 [17]: stdprc = pd.read_excel('data/standard_process_rate.xlsx') # "openpy
         xl"을 설치해야 할 수 있음 "pip install openpyxl"
         stdprc
```

```
Out[17]:
```

	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	↑
14	15	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
15	16	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
16	17	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
17	18	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
18	19	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
19	20	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
20	21	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
21	22	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
22	23	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
23	24	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
24	25	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
25	26	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
26	27	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
27	28	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
28	29	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
29	30	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
30	31	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
31	32	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
32	33	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
33	34	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
34	35	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑
35	36	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	↑

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

```
In [18]: lencstrn = len(idx.cstrn)
cstrnprc = stdprc[lencstrn][:lencstrn]
cstrnprc.index = idx.cstrn
cstrnprc._name = '공정률'
cstrnprc
```

```
Out[18]: 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 [19]: 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 [20]: cost.공사비.건축비.공정률표
```

Out[20]:

	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 [21]: cost.공사비.건축비.dfall

Out[21]:

	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	C
2023-02-28	0.0000	0.0000	0.0	0.0	0.0	0.0	0.0	C
2023-03-31	0.0000	0.0000	0.0	0.0	0.0	0.0	0.0	C

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

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

In [22]: `cost.공사비.건축비.amt`

Out[22]: 21631.5

In [23]: `cost.공사비.건축비.vars`

Out[23]: ['index', 'name', '공사단가', '연면적', 'amt', '공정률표']

(4) 인입비 설정

```
In [24]: 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 [25]: `cost.공사비.smry`

Out[25]: {'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 [26]: `cost.공사비.amtlst`

Out[26]: 철거비 210.000
 건축비 21631.500
 인입비 137.655
 dtype: float64

In [27]: `cost.공사비.amt`

Out[27]: 21979.155

In []:

4) 간접공사비 가정

```
In [28]: 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 [29]: cost.간접공사비.smry
```

```
Out[29]: {'설계비': {'적용단가': 0.1, '연면적': 3933, 'amt': 393.3},
          '감리비': {'월단가': 15.0, 'amt': 360.0},
          '인허가등': {'amt': 300.0}}
```

```
In [30]: cost.간접공사비.amt1st
```

```
Out[30]: 설계비      393.3
          감리비      360.0
          인허가등    300.0
          dtype: float64
```

```
In [31]: cost.간접공사비.amt
```

```
Out[31]: 1053.3
```

```
In [ ]:
```

5) 판매비 가정

```

In [32]: 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
        c.분양가정테이블['수수료근생'] = c.분양가정테이블['계약근생'] * c.수수료율

        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 [33]: cost.판매비.분양수수료.dfall
```

Out[33]:

	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	724.0	724.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-05-31	0.0	724.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-06-30	0.0	724.0	0.0	0.0	0.0	0.0	0.0	0.0

2023-07-31	0.0	724.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-08-31	0.0	724.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-09-30	0.0	724.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-10-31	724.0	1448.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-11-30	0.0	1448.0	0.0	0.0	0.0	0.0	0.0	0.0
2023-12-31	0.0	1448.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-01-31	0.0	1448.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-02-29	0.0	1448.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-03-31	0.0	1448.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-04-30	724.0	2172.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-05-31	0.0	2172.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-06-30	0.0	2172.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-07-31	0.0	2172.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-08-31	0.0	2172.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-09-30	0.0	2172.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-10-31	724.0	2896.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-11-30	0.0	2896.0	0.0	0.0	0.0	0.0	0.0	0.0
2024-12-31	0.0	2896.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-01-31	0.0	2896.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-02-28	0.0	2896.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-03-31	0.0	2896.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-04-30	1172.0	4068.0	0.0	0.0	0.0	0.0	0.0	0.0

2025-05-31	0.0	4068.0	0.0	0.0	0.0	0.0	0.0	0.0
2025-06-30	0.0	4068.0	0.0	0.0	0.0	0.0	0.0	0.0

In [34]: `cost.판매비.amt`

Out[34]: 6738.0

In [35]: `cost.판매비.amt1st`

Out[35]: MH운영비 1500.0
광고비 1170.0
분양수수료 4068.0
dtype: float64

In [36]: `cost.판매비.smry`

Out[36]: {'MH운영비': {'월단가': 60, 'amt': 1500},
'광고비': {'분양매출': 78000.0, '적용비율': 0.015, 'amt': 1170.0, '월단가': 46.8},
'분양수수료': {'수수료율_오피': 0.05,
'수수료율_근생': 0.08,
'분양가정테이블':
소계 수수료오피 수수료근생 오피 근생 계약오피 계약근생 계약
2023-04-30 0.2 0.0 14480.0 0.0 14480.0 724.0 0.0
2023-10-31 0.2 0.0 14480.0 0.0 14480.0 724.0 0.0
2024-04-30 0.2 0.0 14480.0 0.0 14480.0 724.0 0.0
2024-10-31 0.2 0.0 14480.0 0.0 14480.0 724.0 0.0
2025-04-30 0.2 1.0 14480.0 5600.0 20080.0 724.0 448.0,
'수수료_오피': 3620.0,
'수수료_근생': 448.0,
'amt': 4068.0}}

In []:

6) 일반사업비 가정

```
In [37]: 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 [38]: cost.일반사업비.smry
```

```
Out[38]: {'신탁수수료': {'분양매출': 78000.0, '적용비율': 0.02, 'amt': 1560.0},
          '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': 78000.0,
                      '적용비율': 0.01,
                      'amt': 780.0,
                      '월단가': 28.888888888888889}}
```

```
In [39]: cost.일반사업비.amt
```

```
Out[39]: 3230.0
```

```
In [40]: cost.일반사업비.amtlst
```

```
Out[40]: 신탁수수료      1560.0
          시행사운영비    750.0
          금융조달비      140.0
          예비비          780.0
          dtype: float64
```

```
In [ ]:
```

7) 제세공과금 가정

```
In [41]: 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 [42]: cost.제세공과금.smry
```

```
Out[42]: {'상하수원인자부담금': {'amt': 155.0},
          '보존등기비': {'과세표준': 26262.454999999998,
                        '취득세': 735.3487399999999,
                        '지방교육세': 42.019928,
                        '농어촌특별세': 52.52491,
                        'amt': 829.8935779999999}}
```

```
In [43]: cost.제세공과금.amtlst
```

```
Out[43]: 상하수원인자부담금    155.000000
          보존등기비          829.893578
          dtype: float64
```

In [44]: cost.제세공과금.amt

Out[44]: 984.8935779999999

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 [45]: cost.mrg2.dfall

Out[45]:

	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	23663.888889	23663.888889	0.0	0.0	0.0	0.0	0.0	
2023-04-30	2038.590389	25702.479278	0.0	0.0	0.0	0.0	0.0	
2023-05-31	505.161389	26207.640667	0.0	0.0	0.0	0.0	0.0	
2023-06-30	570.055889	26777.696556	0.0	0.0	0.0	0.0	0.0	
2023-07-31	461.898389	27239.594944	0.0	0.0	0.0	0.0	0.0	
2023-08-31	526.792889	27766.387833	0.0	0.0	0.0	0.0	0.0	
2023-09-30	678.213389	28444.601222	0.0	0.0	0.0	0.0	0.0	
2023-10-31	1553.633889	29998.235111	0.0	0.0	0.0	0.0	0.0	
2023-11-30	916.159889	30914.395000	0.0	0.0	0.0	0.0	0.0	
2023-12-31	851.265389	31765.660389	0.0	0.0	0.0	0.0	0.0	

2024-01-31	829.633889	32595.294278	0.0	0.0	0.0	0.0	0.0
2024-02-29	829.633889	33424.928167	0.0	0.0	0.0	0.0	0.0
2024-03-31	959.422889	34384.351056	0.0	0.0	0.0	0.0	0.0
2024-04-30	1878.106389	36262.457444	0.0	0.0	0.0	0.0	0.0
2024-05-31	1413.684389	37676.141833	0.0	0.0	0.0	0.0	0.0
2024-06-30	1673.262389	39349.404222	0.0	0.0	0.0	0.0	0.0
2024-07-31	1824.682889	41174.087111	0.0	0.0	0.0	0.0	0.0
2024-08-31	1911.208889	43085.296000	0.0	0.0	0.0	0.0	0.0
2024-09-30	1846.314389	44931.610389	0.0	0.0	0.0	0.0	0.0
2024-10-31	2483.788389	47415.398778	0.0	0.0	0.0	0.0	0.0
2024-11-30	1651.630889	49067.029667	0.0	0.0	0.0	0.0	0.0
2024-12-31	1521.841889	50588.871556	0.0	0.0	0.0	0.0	0.0
2025-01-31	1327.158389	51916.029944	0.0	0.0	0.0	0.0	0.0
2025-02-28	1024.317389	52940.347333	0.0	0.0	0.0	0.0	0.0
2025-03-31	1313.423467	54253.770800	0.0	0.0	0.0	0.0	0.0
2025-04-30	1337.688889	55591.459689	0.0	0.0	0.0	0.0	0.0
2025-05-31	28.888889	55620.348578	0.0	0.0	0.0	0.0	0.0
2025-06-30	0.000000	55620.348578	0.0	0.0	0.0	0.0	0.0

```
In [46]: @setattr(cost)
def estimate_cost_amt(cost, idxno):
    cst = cost.mrg2
    return cst.scd_in[idxno]
```

```
In [47]: cost.estimate_cost_amt(idx[2])
```

```
Out[47]: 23663.888888888889
```

```
In [48]: cost.estimate_cost_amt(idx.loan[0])
```

```
Out[48]: 23663.888888888889
```

```
In [49]: cost.estimate_cost_amt(idx.cstrn[0])
```

```
Out[49]: 2038.5903888888888
```

```
In [ ]:
```

2) 비용 지출 함수

- 운영계좌에서 개별 비용 Account에게 매월 지출 예정된 금원을 지출함.

```
In [50]: @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 [51]: oprtg = Account(idx)
oprtg.addamt(idx[0], 10_000)
```

```
In [52]: oprtg.df
```

Out[52]:

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

```
Out[53]: 23663.888888888889
```

```
In [54]: oprtg.df
```


Out[54]:

	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	23663.888889	-13663.888889
2023-04-30	-13663.888889	0.0	0.000000	-13663.888889
2023-05-31	-13663.888889	0.0	0.000000	-13663.888889
2023-06-30	-13663.888889	0.0	0.000000	-13663.888889
2023-07-31	-13663.888889	0.0	0.000000	-13663.888889
2023-08-31	-13663.888889	0.0	0.000000	-13663.888889
2023-09-30	-13663.888889	0.0	0.000000	-13663.888889
2023-10-31	-13663.888889	0.0	0.000000	-13663.888889
2023-11-30	-13663.888889	0.0	0.000000	-13663.888889
2023-12-31	-13663.888889	0.0	0.000000	-13663.888889
2024-01-31	-13663.888889	0.0	0.000000	-13663.888889
2024-02-29	-13663.888889	0.0	0.000000	-13663.888889
2024-03-31	-13663.888889	0.0	0.000000	-13663.888889
2024-04-30	-13663.888889	0.0	0.000000	-13663.888889
2024-05-31	-13663.888889	0.0	0.000000	-13663.888889
2024-06-30	-13663.888889	0.0	0.000000	-13663.888889
2024-07-31	-13663.888889	0.0	0.000000	-13663.888889
2024-08-31	-13663.888889	0.0	0.000000	-13663.888889
2024-09-30	-13663.888889	0.0	0.000000	-13663.888889
2024-10-31	-13663.888889	0.0	0.000000	-13663.888889
2024-11-30	-13663.888889	0.0	0.000000	-13663.888889
2024-12-31	-13663.888889	0.0	0.000000	-13663.888889
2025-01-31	-13663.888889	0.0	0.000000	-13663.888889
2025-02-28	-13663.888889	0.0	0.000000	-13663.888889
2025-03-31	-13663.888889	0.0	0.000000	-13663.888889
2025-04-30	-13663.888889	0.0	0.000000	-13663.888889
2025-05-31	-13663.888889	0.0	0.000000	-13663.888889
2025-06-30	-13663.888889	0.0	0.000000	-13663.888889

In [55]: cost.mrg2.dfall

Out[55]:



	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	23663.888889	23663.888889	0.0	0.0	0.000000	23663.888889	23663.888889
2023-04-30	2038.590389	25702.479278	0.0	0.0	23663.888889	0.000000	23663.888889
2023-05-31	505.161389	26207.640667	0.0	0.0	23663.888889	0.000000	23663.888889
2023-06-30	570.055889	26777.696556	0.0	0.0	23663.888889	0.000000	23663.888889
2023-07-31	461.898389	27239.594944	0.0	0.0	23663.888889	0.000000	23663.888889
2023-08-31	526.792889	27766.387833	0.0	0.0	23663.888889	0.000000	23663.888889
2023-09-30	678.213389	28444.601222	0.0	0.0	23663.888889	0.000000	23663.888889
2023-10-31	1553.633889	29998.235111	0.0	0.0	23663.888889	0.000000	23663.888889
2023-11-30	916.159889	30914.395000	0.0	0.0	23663.888889	0.000000	23663.888889
2023-12-31	851.265389	31765.660389	0.0	0.0	23663.888889	0.000000	23663.888889
2024-01-31	829.633889	32595.294278	0.0	0.0	23663.888889	0.000000	23663.888889
2024-02-29	829.633889	33424.928167	0.0	0.0	23663.888889	0.000000	23663.888889
2024-03-31	959.422889	34384.351056	0.0	0.0	23663.888889	0.000000	23663.888889
2024-04-30	1878.106389	36262.457444	0.0	0.0	23663.888889	0.000000	23663.888889
2024-05-31	1413.684389	37676.141833	0.0	0.0	23663.888889	0.000000	23663.888889
2024-06-30	1673.262389	39349.404222	0.0	0.0	23663.888889	0.000000	23663.888889
2024-07-31	1824.682889	41174.087111	0.0	0.0	23663.888889	0.000000	23663.888889
2024-08-31	1911.208889	43085.296000	0.0	0.0	23663.888889	0.000000	23663.888889
2024-09-30	1846.314389	44931.610389	0.0	0.0	23663.888889	0.000000	23663.888889

2024-10-31	2483.788389	47415.398778	0.0	0.0	23663.888889	0.000000	23663.888889
2024-11-30	1651.630889	49067.029667	0.0	0.0	23663.888889	0.000000	23663.888889
2024-12-31	1521.841889	50588.871556	0.0	0.0	23663.888889	0.000000	23663.888889
2025-01-31	1327.158389	51916.029944	0.0	0.0	23663.888889	0.000000	23663.888889
2025-02-28	1024.317389	52940.347333	0.0	0.0	23663.888889	0.000000	23663.888889
2025-03-31	1313.423467	54253.770800	0.0	0.0	23663.888889	0.000000	23663.888889
2025-04-30	1337.688889	55591.459689	0.0	0.0	23663.888889	0.000000	23663.888889
2025-05-31	28.888889	55620.348578	0.0	0.0	23663.888889	0.000000	23663.888889
2025-06-30	0.000000	55620.348578	0.0	0.0	23663.888889	0.000000	23663.888889

In [56]: `cost.토지비.토지매입가액.dfall`

Out[56]:

	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	20430.0	20430.0	0.0
2023-04-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-05-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-06-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-07-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-08-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-09-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-10-31	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0
2023-11-30	0.0	20430.0	0.0	0.0	20430.0	0.0	20430.0	0.0

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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 []: