[4-3. 현금흐름 계산3]

1. 필요한 모듈 import

- 기존 작성한 모듈 및 필요 파일 확인
    - FCHotel_FSmodeling_assumption.xlsx
    - m00_general_function.py
    - m01_assumption.py
    - m02_index.py
    - m03_funding.py
    - m04_operating_income.py
    - m05_operating_cost.py
    - m06_facility_cost.py
- 앞에서 작성한 general_function의 df_seperator 함수도 추가

In [ ]:
```
import pandas as pd
pd.set_option('display.max_rows', 30)
pd.set_option('display.max_columns', 100)
pd.set_option('display.max_colwidth', 20)
pd.set_option('display.width', 300)

# DataFrame의 출력을 확장하여 한 줄로 계속 출력되도록 설정
pd.set_option('display.expand_frame_repr', True)

# 앞에서 작성한 general_function의 df_seperator 함수도 추가
from m00_general_function import df_seperator

from m01_assumption import assumption
from m02_index import index
from m03_funding import funding
from m04_operating_income import operating_income
from m05_operating_cost import operating_cost
from m06_facility_cost import facility_cost
```

2. 운영비용 현금흐름 작성

2-1. operating_cost 객체 확인

In [ ]:
```
operating_cost.keys()
```

Out[ ]:
```
dict_keys(['객실운영비', '관리운영비', '인건비'])
```

In [ ]:
```
operating_cost['객실운영비']
```

Out[ ]:
```
{'청소세탁비':                TypeA     TypeB     TypeC     Total
 2023-12-31         0         0         0         0
 2024-01-31  11160000  13392000  10540000  35092000
```

```
2024-02-29   9860000  11832000   9280000  30972000
2024-03-31   9920000  11904000   8680000  30504000
2024-04-30   9600000  11520000   8400000  29520000
...              ...       ...       ...       ...
2026-09-30  10184640  12221568   9548100  31954308
2026-10-31  10524128  12628953   9866370  33019451
2026-11-30   8911560  10693872   8911560  28516992
2026-12-31  11839644  14207572  11839644  37886860
2027-01-31         0         0         0         0

[38 rows x 4 columns],
'수도광열비':               TypeA    TypeB    TypeC  Overhead     Total
2023-12-31        0        0        0   3000000   3000000
2024-01-31  5580000  6696000  5270000   3000000  20546000
2024-02-29  4930000  5916000  4640000   3000000  18486000
2024-03-31  4960000  5952000  4340000   3000000  18252000
2024-04-30  4800000  5760000  4200000   3000000  17760000
...             ...      ...      ...       ...       ...
2026-09-30  5092320  6110784  4774050   3182700  19159854
2026-10-31  5262064  6314476  4933185   3182700  19692425
2026-11-30  4455780  5346936  4455780   3182700  17441196
2026-12-31  5919822  7103786  5919822   3182700  22126130
2027-01-31        0        0        0   3278181   3278181

[38 rows x 5 columns],
'예약수수료':               TypeA    TypeB    TypeC     Total
2023-12-31        0        0        0         0
2024-01-31  4352400  5022000  3952500  13326900
2024-02-29  3845400  4437000  3480000  11762400
2024-03-31  2976000  3571200  2604000   9151200
2024-04-30  2880000  3456000  2520000   8856000
...             ...      ...      ...       ...
2026-09-30  2880000  3456000  2700000   9036000
2026-10-31  2976000  3571200  2790000   9337200
2026-11-30  2520000  3024000  2520000   8064000
```

```
2026-12-31  4352400  5022000  4185000  13559400
2027-01-31        0        0        0         0

[38 rows x 4 columns],
'TypeA': 2023-12-31           0
2024-01-31    21092400
2024-02-29    18635400
2024-03-31    17856000
2024-04-30    17280000
                ...
2026-09-30    18156960
2026-10-31    18762192
2026-11-30    15887340
2026-12-31    22111866
2027-01-31           0
Name: TypeA, Length: 38, dtype: int64,
'TypeB': 2023-12-31           0
2024-01-31    25110000
2024-02-29    22185000
2024-03-31    21427200
2024-04-30    20736000
                ...
2026-09-30    21788352
2026-10-31    22514629
2026-11-30    19064808
2026-12-31    26333358
2027-01-31           0
Name: TypeB, Length: 38, dtype: int64,
'TypeC': 2023-12-31           0
2024-01-31    19762500
2024-02-29    17400000
2024-03-31    15624000
2024-04-30    15120000
                ...
2026-09-30    17022150
```

```
2026-10-31    17589555
2026-11-30    15887340
2026-12-31    21944466
2027-01-31           0
Name: TypeC, Length: 38, dtype: int64,
'Overhead': 2023-12-31    3000000
2024-01-31    3000000
2024-02-29    3000000
2024-03-31    3000000
2024-04-30    3000000
               ...
2026-09-30    3182700
2026-10-31    3182700
2026-11-30    3182700
2026-12-31    3182700
2027-01-31    3278181
Name: Overhead, Length: 38, dtype: int64,
'Total': 2023-12-31     3000000
2024-01-31    68964900
2024-02-29    61220400
2024-03-31    57907200
2024-04-30    56136000
                ...
2026-09-30    60150162
2026-10-31    62049076
2026-11-30    54022188
2026-12-31    73572390
2027-01-31     3278181
Name: Total, Length: 38, dtype: int64}
```

2-2. operating_cost - 객실운영비 객체의 현금흐름 반영

In [ ]:
```
#### cashflow, balance 객체 초기화 ####
cashflow = pd.DataFrame(
```

```
    columns = ['date', 'categoryA', 'categoryB', 'categoryC', '입금금액', '출금금액']
)

balance = pd.DataFrame({
    '기초현금': [0] * len(index['model']),
    '입금금액': [0] * len(index['model']),
    '출금금액': [0] * len(index['model']),
    '기말현금': [0] * len(index['model']),
},
    index=index['model']
)
room_type_list = list(assumption['business_overview']['객실수'].keys())


#### cashflow, balance 작성 ####
idx = 0
cash_balance = 0
for dt in index['model']:
    #### 0. 기초현금 계산
    balance.loc[dt, '기초현금'] = cash_balance

    #### 1. 자금조달소요
    ## 1-1. 자기자본 유입
    amount = funding['자기자본'].loc[dt, '자기자본유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '자기자본', '자기자본유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

    ## 1-2. 차입금 유입
    amount = funding['차입금'].loc[dt, '차입금유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '차입금', '차입금유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1
```

```
## 1-3. 자산매입
amount = funding['자산매입'].loc[dt, '자산매입']
if amount > 0:
    cashflow.loc[idx] = [dt, '자산매입', '자산매입', '매입대금지출', 0, amount]
    balance.loc[dt, '출금금액'] += amount
    idx += 1
amount = funding['자산매입'].loc[dt, '매입부수비용']
if amount > 0:
    cashflow.loc[idx] = [dt, '자산매입', '매입부수비용', '부수비용지출', 0, amount]
    balance.loc[dt, '출금금액'] += amount
    idx += 1

#### 2. 운영수입
for room_type in room_type_list:
    amount = operating_income[room_type].loc[dt, '객실수입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '운영수입', '객실수입', room_type, amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

#### 3. 운영비용 - 객실운영비
## 3-1. 청소세탁비
for room_type in room_type_list:
    amount = operating_cost['객실운영비']['청소세탁비'].loc[dt, room_type]
    if amount > 0:
        cashflow.loc[idx] = [dt, '객실운영비', '청소세탁비', room_type, 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

## 3-2. 수도광열비
for room_type in room_type_list:
    amount = operating_cost['객실운영비']['수도광열비'].loc[dt, room_type]
    if amount > 0:
        cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', room_type, 0, amount]
```

```
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    amount = operating_cost['객실운영비']['수도광열비'].loc[dt, 'Overhead']
    if amount > 0:
        cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', 'Overhead', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 3-3. 예약수수료
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['예약수수료'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '예약수수료', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1


    #### 9. 기말현금 계산
    cash_balance = (
        balance.loc[dt, '기초현금'] + balance.loc[dt, '입금금액'] - balance.loc[dt, '출금금액']
    )
    balance.loc[dt, '기말현금'] = cash_balance
```

In [ ]:
```
cashflow
```

Out[ ]:

	date	categoryA	categoryB	categoryC	입금금액	출금금액
0	2023-12-31	자금조달	자기자본	자기자본유입	10000000000	0
1	2023-12-31	자금조달	차입금	차입금유입	10000000000	0
2	2023-12-31	자산매입	자산매입	매입대금지출	0	18000000000
3	2023-12-31	자산매입	매입부수비용	부수비용지출	0	1000000000
4	2023-12-31	객실운영비	수도광열비	Overhead	0	3000000
...	...	...	...	...	...	...
457	2026-12-31	객실운영비	수도광열비	Overhead	0	3182700
458	2026-12-31	객실운영비	예약수수료	TypeA	0	4352400
459	2026-12-31	객실운영비	예약수수료	TypeB	0	5022000
460	2026-12-31	객실운영비	예약수수료	TypeC	0	4185000
461	2027-01-31	객실운영비	수도광열비	Overhead	0	3278181

462 rows × 6 columns

In [ ]:
```
balance
```

Out[ ]:

	기초현금	입금금액	출금금액	기말현금
2023-12-31	0	20000000000	19003000000	997000000
2024-01-31	997000000	444230000	68964900	1372265100
2024-02-29	1372265100	392080000	61220400	1703124700
2024-03-31	1703124700	305040000	57907200	1950257500
2024-04-30	1950257500	295200000	56136000	2189321500
...	...	...	...	...
2026-09-30	10109043677	301200000	60150162	10350093515
2026-10-31	10350093515	311240000	62049076	10599284439
2026-11-30	10599284439	268800000	54022188	10814062251
2026-12-31	10814062251	451980000	73572390	11192469861
2027-01-31	11192469861	0	3278181	11189191680

38 rows × 4 columns

2-3. operating_cost - 관리운영비 객체의 현금흐름 반영

In [ ]:
```
#### cashflow, balance 객체 초기화 ####
cashflow = pd.DataFrame(
    columns = ['date', 'categoryA', 'categoryB', 'categoryC', '입금금액', '출금금액']
)

balance = pd.DataFrame({
    '기초현금': [0] * len(index['model']),
    '입금금액': [0] * len(index['model']),
    '출금금액': [0] * len(index['model']),
```

```
    '기말현금': [0] * len(index['model']),
},
    index=index['model']
)
room_type_list = list(assumption['business_overview']['객실수'].keys())


#### cashflow, balance 작성 ####
idx = 0
cash_balance = 0
for dt in index['model']:
    #### 0. 기초현금 계산
    balance.loc[dt, '기초현금'] = cash_balance

    #### 1. 자금조달소요
    ## 1-1. 자기자본 유입
    amount = funding['자기자본'].loc[dt, '자기자본유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '자기자본', '자기자본유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

    ## 1-2. 차입금 유입
    amount = funding['차입금'].loc[dt, '차입금유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '차입금', '차입금유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

    ## 1-3. 자산매입
    amount = funding['자산매입'].loc[dt, '자산매입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자산매입', '자산매입', '매입대금지출', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
```

```
    amount = funding['자산매입'].loc[dt, '매입부수비용']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자산매입', '매입부수비용', '부수비용지출', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    #### 2. 운영수입
    for room_type in room_type_list:
        amount = operating_income[room_type].loc[dt, '객실수입']
        if amount > 0:
            cashflow.loc[idx] = [dt, '운영수입', '객실수입', room_type, amount, 0]
            balance.loc[dt, '입금금액'] += amount
            idx += 1

    #### 3. 운영비용 - 객실운영비
    ## 3-1. 청소세탁비
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['청소세탁비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '청소세탁비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    ## 3-2. 수도광열비
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['수도광열비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    amount = operating_cost['객실운영비']['수도광열비'].loc[dt, 'Overhead']
    if amount > 0:
        cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', 'Overhead', 0, amount]
        balance.loc[dt, '출금금액'] += amount
```

```
        idx += 1

    ## 3-3. 예약수수료
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['예약수수료'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '예약수수료', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    #### 4. 운영비용 - 관리운영비
    ## 4-1. 광고홍보비
    amount = operating_cost['관리운영비']['관리운영비'].loc[dt, '광고홍보비']
    if amount > 0:
        cashflow.loc[idx] = [dt, '관리운영비', '관리운영비', '광고홍보비', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 4-2. 기타운영비
    amount = operating_cost['관리운영비']['관리운영비'].loc[dt, '기타운영비']
    if amount > 0:
        cashflow.loc[idx] = [dt, '관리운영비', '관리운영비', '기타운영비', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1


    #### 9. 기말현금 계산
    cash_balance = (
        balance.loc[dt, '기초현금'] + balance.loc[dt, '입금금액'] - balance.loc[dt, '출금금액']
    )
    balance.loc[dt, '기말현금'] = cash_balance
```

In [ ]:
```
cashflow[cashflow['categoryA'] == '관리운영비']
```

Out[ ]:

	date	categoryA	categoryB	categoryC	입금금액	출금금액
5	2023-12-31	관리운영비	관리운영비	광고홍보비	0	30000000
6	2023-12-31	관리운영비	관리운영비	기타운영비	0	10000000
20	2024-01-31	관리운영비	관리운영비	광고홍보비	0	30000000
21	2024-01-31	관리운영비	관리운영비	기타운영비	0	10000000
35	2024-02-29	관리운영비	관리운영비	광고홍보비	0	30000000
...	...	...	...	...	...	...
519	2026-11-30	관리운영비	관리운영비	기타운영비	0	10609000
533	2026-12-31	관리운영비	관리운영비	광고홍보비	0	31827000
534	2026-12-31	관리운영비	관리운영비	기타운영비	0	10609000
536	2027-01-31	관리운영비	관리운영비	광고홍보비	0	32781810
537	2027-01-31	관리운영비	관리운영비	기타운영비	0	10927270

76 rows × 6 columns

2-4. operating_cost - 인건비 객체의 현금흐름 반영

In [ ]:

```
#### cashflow, balance 객체 초기화 ####
cashflow = pd.DataFrame(
    columns = ['date', 'categoryA', 'categoryB', 'categoryC', '입금금액', '출금금액']
)

balance = pd.DataFrame({
    '기초현금': [0] * len(index['model']),
    '입금금액': [0] * len(index['model']),
    '출금금액': [0] * len(index['model']),
```

```
    '기말현금': [0] * len(index['model']),
},
    index=index['model']
)
room_type_list = list(assumption['business_overview']['객실수'].keys())


#### cashflow, balance 작성 ####
idx = 0
cash_balance = 0
for dt in index['model']:
    #### 0. 기초현금 계산
    balance.loc[dt, '기초현금'] = cash_balance

    #### 1. 자금조달소요
    ## 1-1. 자기자본 유입
    amount = funding['자기자본'].loc[dt, '자기자본유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '자기자본', '자기자본유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

    ## 1-2. 차입금 유입
    amount = funding['차입금'].loc[dt, '차입금유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '차입금', '차입금유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

    ## 1-3. 자산매입
    amount = funding['자산매입'].loc[dt, '자산매입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자산매입', '자산매입', '매입대금지출', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
```

```
    amount = funding['자산매입'].loc[dt, '매입부수비용']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자산매입', '매입부수비용', '부수비용지출', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    #### 2. 운영수입
    for room_type in room_type_list:
        amount = operating_income[room_type].loc[dt, '객실수입']
        if amount > 0:
            cashflow.loc[idx] = [dt, '운영수입', '객실수입', room_type, amount, 0]
            balance.loc[dt, '입금금액'] += amount
            idx += 1

    #### 3. 운영비용 - 객실운영비
    ## 3-1. 청소세탁비
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['청소세탁비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '청소세탁비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    ## 3-2. 수도광열비
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['수도광열비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    amount = operating_cost['객실운영비']['수도광열비'].loc[dt, 'Overhead']
    if amount > 0:
        cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', 'Overhead', 0, amount]
        balance.loc[dt, '출금금액'] += amount
```

```
        idx += 1

    ## 3-3. 예약수수료
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['예약수수료'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '예약수수료', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    #### 4. 운영비용 - 관리운영비
    ## 4-1. 광고홍보비
    amount = operating_cost['관리운영비']['관리운영비'].loc[dt, '광고홍보비']
    if amount > 0:
        cashflow.loc[idx] = [dt, '관리운영비', '관리운영비', '광고홍보비', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 4-2. 기타운영비
    amount = operating_cost['관리운영비']['관리운영비'].loc[dt, '기타운영비']
    if amount > 0:
        cashflow.loc[idx] = [dt, '관리운영비', '관리운영비', '기타운영비', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    #### 5. 운영비용 - 인건비
    ## 5-1. 객실운영팀
    amount = operating_cost['인건비']['객실운영팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '객실운영팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = operating_cost['인건비']['객실운영팀'].loc[dt, '임시직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '객실운영팀', '임시직', 0, amount]
```

```
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 5-2. 경영지원팀
    amount = operating_cost['인건비']['경영지원팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '경영지원팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = operating_cost['인건비']['경영지원팀'].loc[dt, '임원']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '경영지원팀', '임원', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 5-3. 마케팅팀
    amount = operating_cost['인건비']['마케팅팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '마케팅팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 5-4. 시설관리팀
    amount = operating_cost['인건비']['시설관리팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '시설관리팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = operating_cost['인건비']['시설관리팀'].loc[dt, '임시직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '시설관리팀', '임시직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
```

```
    #### 9. 기말현금 계산
    cash_balance = (
        balance.loc[dt, '기초현금'] + balance.loc[dt, '입금금액'] - balance.loc[dt, '출금금액']
    )
    balance.loc[dt, '기말현금'] = cash_balance
```

In [ ]:
```
cashflow[cashflow['categoryA'] == '인건비']
```

Out[ ]:

	date	categoryA	categoryB	categoryC	입금금액	출금금액
7	2023-12-31	인건비	객실운영팀	정규직	0	15287671
8	2023-12-31	인건비	객실운영팀	임시직	0	5095890
9	2023-12-31	인건비	경영지원팀	정규직	0	9172602
10	2023-12-31	인건비	경영지원팀	임원	0	6794520
11	2023-12-31	인건비	마케팅팀	정규직	0	6115068
...	...	...	...	...	...	...
799	2027-01-31	인건비	경영지원팀	정규직	0	10618434
800	2027-01-31	인건비	경영지원팀	임원	0	7865506
801	2027-01-31	인건비	마케팅팀	정규직	0	7078956
802	2027-01-31	인건비	시설관리팀	정규직	0	7078956
803	2027-01-31	인건비	시설관리팀	임시직	0	2949565

266 rows × 6 columns

3. 시설관리비 현금흐름 작성

3-1. facility_cost 객체 확인

In [ ]:
```
facility_cost.keys()
```

Out[ ]:
```
dict_keys(['통상수선비', '대수선공사비', 'TypeA', 'TypeB', 'TypeC', 'Total'])
```

In [ ]:
```
facility_cost['통상수선비']
```

Out[ ]:

	TypeA	TypeB	TypeC	Total
2023-12-31	0	0	0	0
2024-01-31	1116000	1339200	1054000	3509200
2024-02-29	986000	1183200	928000	3097200
2024-03-31	992000	1190400	868000	3050400
2024-04-30	960000	1152000	840000	2952000
...	...	...	...	...
2026-09-30	1018464	1222156	954810	3195430
2026-10-31	1052412	1262895	986637	3301944
2026-11-30	891156	1069387	891156	2851699
2026-12-31	1183964	1420757	1183964	3788685
2027-01-31	0	0	0	0

38 rows × 4 columns

3-2. facility_cost 객체의 현금흐름 반영

In [ ]:
```
#### cashflow, balance 객체 초기화 ####
cashflow = pd.DataFrame(
    columns = ['date', 'categoryA', 'categoryB', 'categoryC', '입금금액', '출금금액']
```

```
)

balance = pd.DataFrame({
    '기초현금': [0] * len(index['model']),
    '입금금액': [0] * len(index['model']),
    '출금금액': [0] * len(index['model']),
    '기말현금': [0] * len(index['model']),
},
    index=index['model']
)
room_type_list = list(assumption['business_overview']['객실수'].keys())


#### cashflow, balance 작성 ####
idx = 0
cash_balance = 0
for dt in index['model']:
    #### 0. 기초현금 계산
    balance.loc[dt, '기초현금'] = cash_balance

    #### 1. 자금조달소요
    ## 1-1. 자기자본 유입
    amount = funding['자기자본'].loc[dt, '자기자본유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '자기자본', '자기자본유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1

    ## 1-2. 차입금 유입
    amount = funding['차입금'].loc[dt, '차입금유입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자금조달', '차입금', '차입금유입', amount, 0]
        balance.loc[dt, '입금금액'] += amount
        idx += 1
```

```
    ## 1-3. 자산매입
    amount = funding['자산매입'].loc[dt, '자산매입']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자산매입', '자산매입', '매입대금지출', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = funding['자산매입'].loc[dt, '매입부수비용']
    if amount > 0:
        cashflow.loc[idx] = [dt, '자산매입', '매입부수비용', '부수비용지출', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    #### 2. 운영수입
    for room_type in room_type_list:
        amount = operating_income[room_type].loc[dt, '객실수입']
        if amount > 0:
            cashflow.loc[idx] = [dt, '운영수입', '객실수입', room_type, amount, 0]
            balance.loc[dt, '입금금액'] += amount
            idx += 1

    #### 3. 운영비용 - 객실운영비
    ## 3-1. 청소세탁비
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['청소세탁비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '청소세탁비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    ## 3-2. 수도광열비
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['수도광열비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
```

```
            idx += 1

    amount = operating_cost['객실운영비']['수도광열비'].loc[dt, 'Overhead']
    if amount > 0:
        cashflow.loc[idx] = [dt, '객실운영비', '수도광열비', 'Overhead', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 3-3. 예약수수료
    for room_type in room_type_list:
        amount = operating_cost['객실운영비']['예약수수료'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '객실운영비', '예약수수료', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    #### 4. 운영비용 - 관리운영비
    ## 4-1. 광고홍보비
    amount = operating_cost['관리운영비']['관리운영비'].loc[dt, '광고홍보비']
    if amount > 0:
        cashflow.loc[idx] = [dt, '관리운영비', '관리운영비', '광고홍보비', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 4-2. 기타운영비
    amount = operating_cost['관리운영비']['관리운영비'].loc[dt, '기타운영비']
    if amount > 0:
        cashflow.loc[idx] = [dt, '관리운영비', '관리운영비', '기타운영비', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    #### 5. 운영비용 - 인건비
    ## 5-1. 객실운영팀
    amount = operating_cost['인건비']['객실운영팀'].loc[dt, '정규직']
    if amount > 0:
```

```
        cashflow.loc[idx] = [dt, '인건비', '객실운영팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = operating_cost['인건비']['객실운영팀'].loc[dt, '임시직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '객실운영팀', '임시직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 5-2. 경영지원팀
    amount = operating_cost['인건비']['경영지원팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '경영지원팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = operating_cost['인건비']['경영지원팀'].loc[dt, '임원']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '경영지원팀', '임원', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 5-3. 마케팅팀
    amount = operating_cost['인건비']['마케팅팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '마케팅팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    ## 5-4. 시설관리팀
    amount = operating_cost['인건비']['시설관리팀'].loc[dt, '정규직']
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '시설관리팀', '정규직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1
    amount = operating_cost['인건비']['시설관리팀'].loc[dt, '임시직']
```

```
    if amount > 0:
        cashflow.loc[idx] = [dt, '인건비', '시설관리팀', '임시직', 0, amount]
        balance.loc[dt, '출금금액'] += amount
        idx += 1

    #### 6. 시설관리비
    ## 6-1. 통상수선비
    for room_type in room_type_list:
        amount = facility_cost['통상수선비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '시설관리비', '통상수선비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1

    ## 6-2. 대수선공사비
    for room_type in room_type_list:
        amount = facility_cost['대수선공사비'].loc[dt, room_type]
        if amount > 0:
            cashflow.loc[idx] = [dt, '시설관리비', '대수선공사비', room_type, 0, amount]
            balance.loc[dt, '출금금액'] += amount
            idx += 1


    #### 9. 기말현금 계산
    cash_balance = (
        balance.loc[dt, '기초현금'] + balance.loc[dt, '입금금액'] - balance.loc[dt, '출금금액']
    )
    balance.loc[dt, '기말현금'] = cash_balance
```

In [ ]:
```
cashflow[cashflow['categoryA'] == '시설관리비']
```

Out[ ]:

	date	categoryA	categoryB	categoryC	입금금액	출금금액
36	2024-01-31	시설관리비	통상수선비	TypeA	0	1116000
37	2024-01-31	시설관리비	통상수선비	TypeB	0	1339200
38	2024-01-31	시설관리비	통상수선비	TypeC	0	1054000
61	2024-02-29	시설관리비	통상수선비	TypeA	0	986000
62	2024-02-29	시설관리비	통상수선비	TypeB	0	1183200
...	...	...	...	...	...	...
875	2026-11-30	시설관리비	통상수선비	TypeB	0	1069387
876	2026-11-30	시설관리비	통상수선비	TypeC	0	891156
899	2026-12-31	시설관리비	통상수선비	TypeA	0	1183964
900	2026-12-31	시설관리비	통상수선비	TypeB	0	1420757
901	2026-12-31	시설관리비	통상수선비	TypeC	0	1183964

108 rows × 6 columns

In [ ]: