```python
In [27]:  import seaborn as sns
          import matplotlib.pyplot as plt
          import pandas as pd
          import pickle
```

```python
In [28]:  sns.set_style(style='darkgrid')
```

```python
In [29]:  def load_data(f_path):
              with open(f_path, 'rb') as f:
                  return pickle.load(f)
```

```python
In [30]:  w = {}
          wo = {}
          for i in range(11, 18):
              w[i] = load_data('with%d.json'%i)
              wo[i] = load_data('without%d.json'%i)
```

```python
In [31]:  for i in range(11, 18):
              min_bal_wo = min(list(map(lambda x:x['balance_c'], wo[i])))
              min_bal_w = min(list(map(lambda x:x['balance_c'], w[i])))
              min_bal = min(min_bal_wo, min_bal_w)
              plt.plot(sum(map(lambda x:x['balance'][:min_bal] ,wo[i]))/len(wo[i]), linewidth=1)

              plt.plot(sum(map(lambda x:x['balance'][:min_bal] ,w[i]))/len(w[i]), linewidth=1)
              plt.legend(labels=('without','with_douzhuan'))
              plt.title('最大加仓%d' % i)
              plt.show()
```
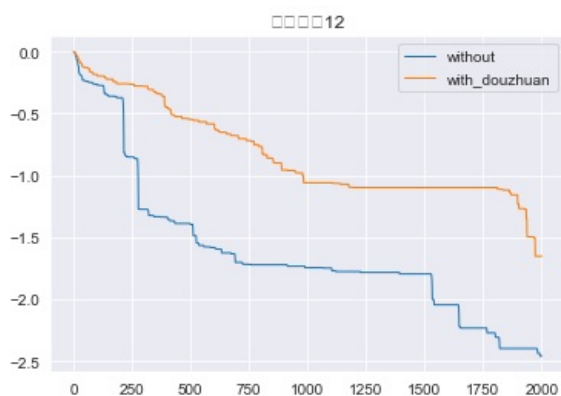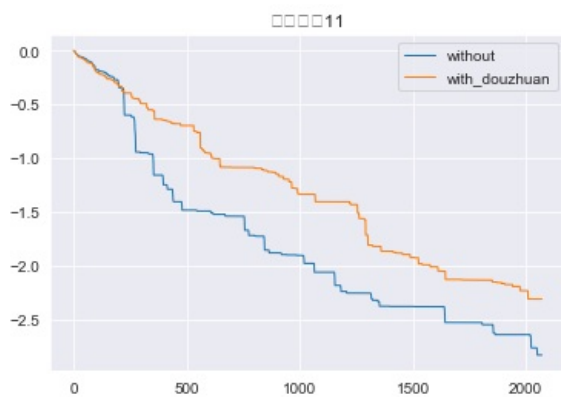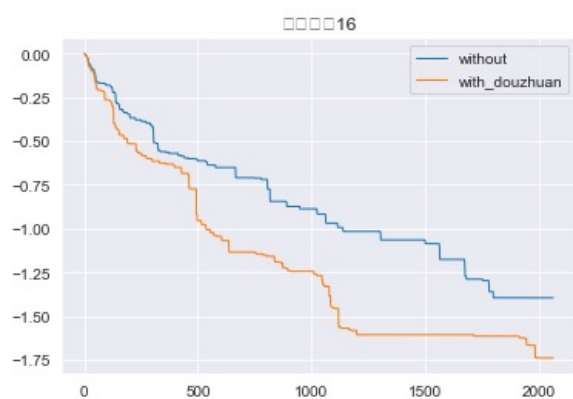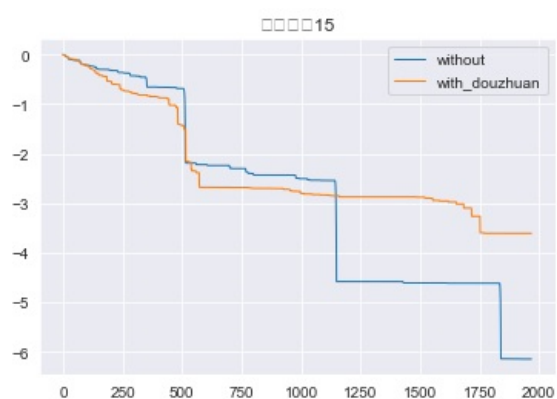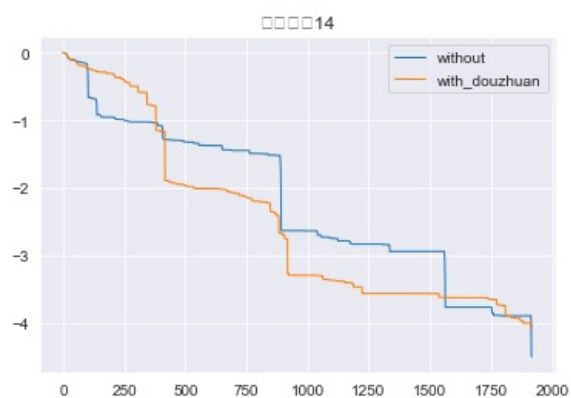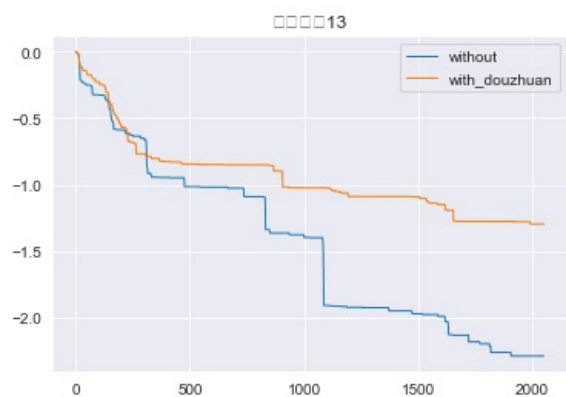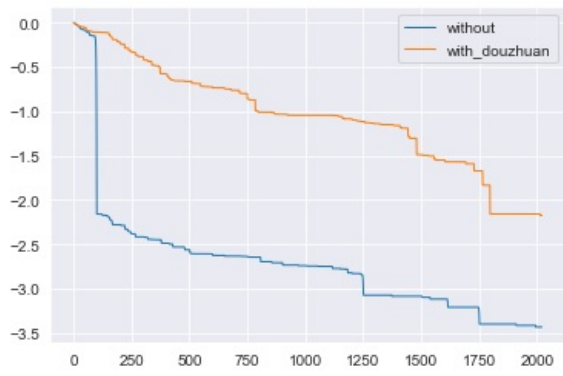
图实验13

图实验14

图实验15

图实验16

最大加仓17
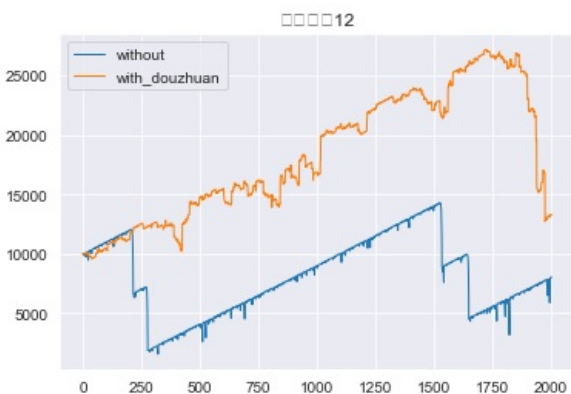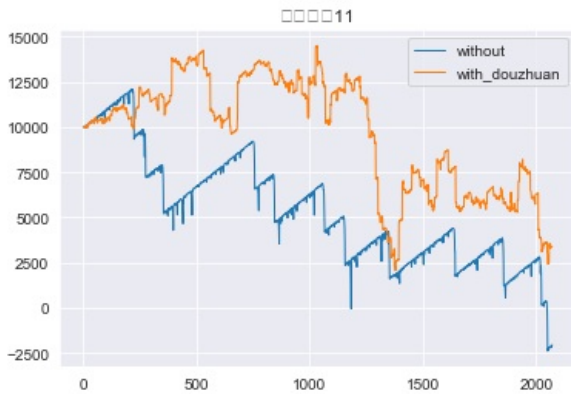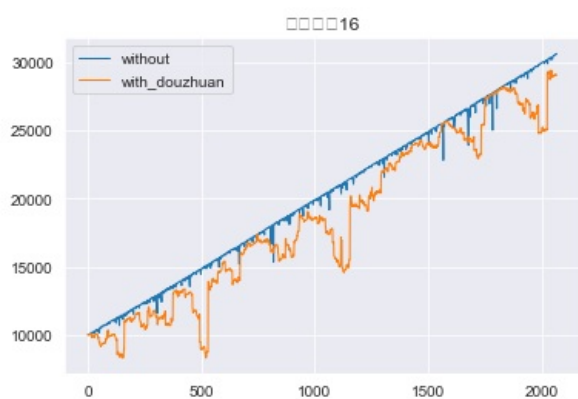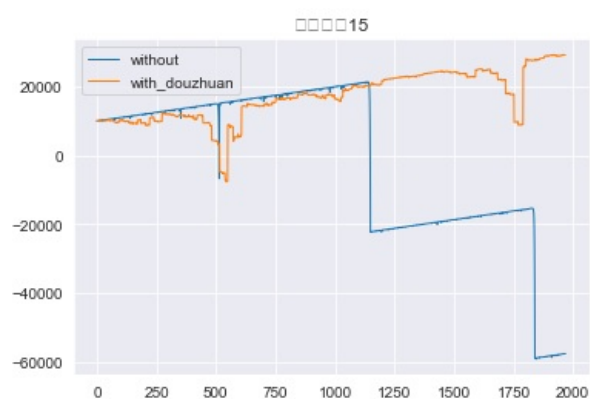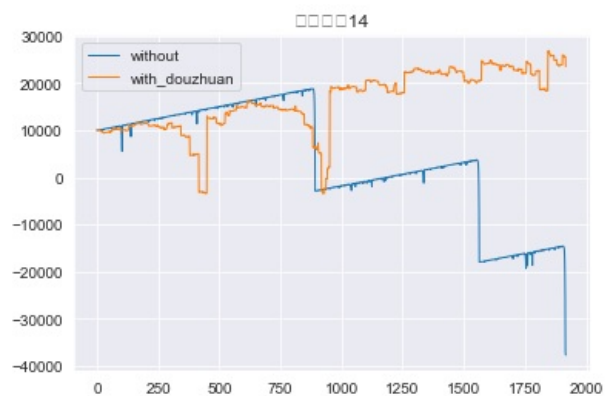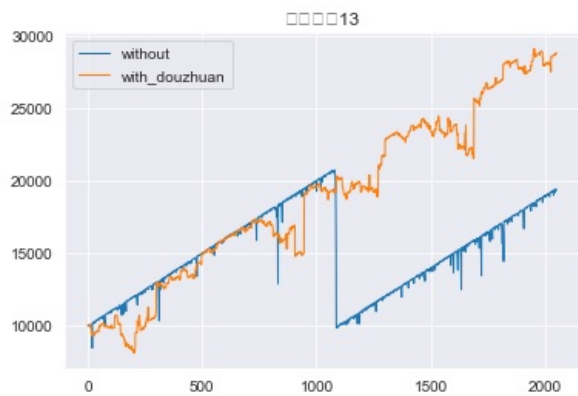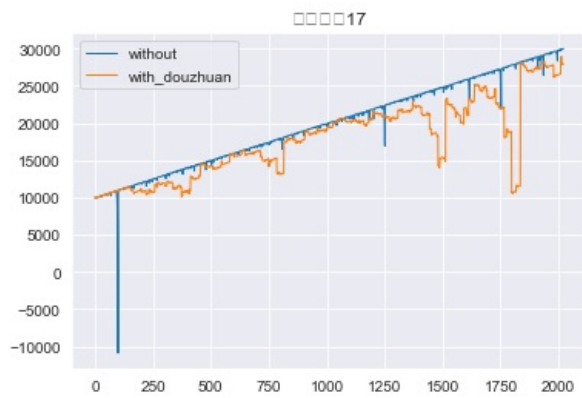
```
for i in range(11, 18):
    min_bac_wo = min(list(map(lambda x:x['back_c'], wo[i])))
    min_bac_w = min(list(map(lambda x:x['back_c'], w[i])))
    min_bac = min(min_bac_wo, min_bac_w)
    plt.plot(sum(map(lambda x:x['back'][:min_bac] ,wo[i]))/len(wo[i]), linewidth=1)

    plt.plot(sum(map(lambda x:x['back'][:min_bac] ,w[i]))/len(w[i]), linewidth=1)
    plt.legend(labels=('without','with_douzhuan'))
    plt.title('最大加仓%d' % i)
    plt.show()
```


最大加仓11

最大加仓12

测试图片13

测试图片14

测试图片15

测试图片16

训练曲线17

In [ ]: