

```
In [38]: # simulate 20 days data using previous 3 days data
def forward_simulate(G, backward_data, n, latent_dim, ts_dim, conditional, use_cuda):
    noise = torch.randn((n, 1, latent_dim))
    backward_data = torch.from_numpy(backward_data)

    if conditional > 0:
        noise[:, :, :conditional] = backward_data[:, :, -conditional:]

    if use_cuda:
        noise = noise.cuda()
        real_samples = real_samples.cuda()
        G.cuda()

    y = G(noise)
    y = y.float()
    if use_cuda:
        y = y.cuda()
    return y.float()
```

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In [39]: data_load_path = r'C:/Users/dai/Code/WGAN_financial_time-series-master/data/^GSPTSE_mont
data = Data(ts_dim, data_load_path)
```

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(111, 17)
```

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In [40]: fake_data, real_data, real_start_prices = get_all_samples(data, generator, latent_dim,
```

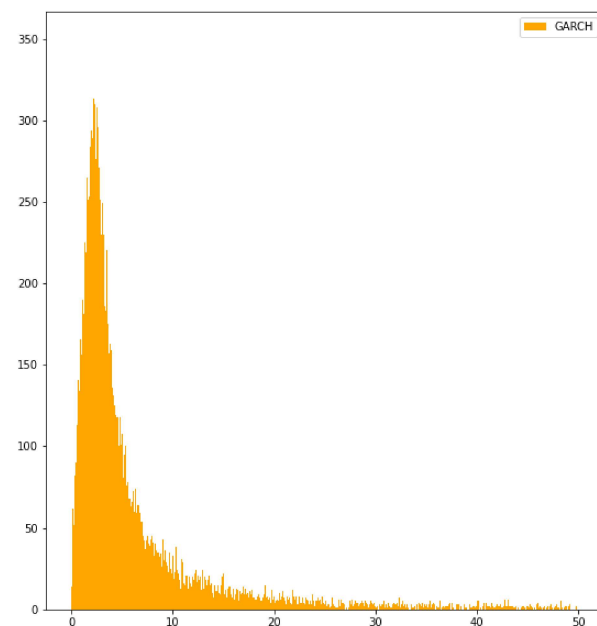
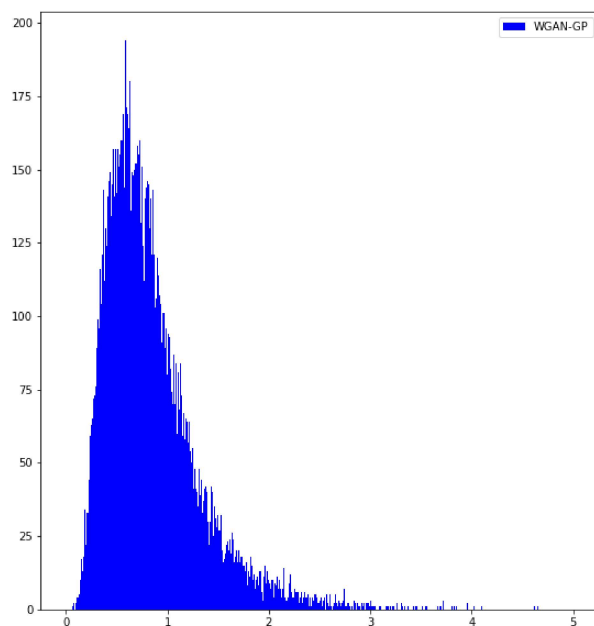
```
In [41]: real_data[-1]
```

```
Out[41]: tensor([[ -3.3239e-01,  6.2045e-01, -4.6673e-01,  4.2272e-01,  4.0818e-02,
  -1.9390e-01, -1.8552e+01, -1.4172e-02, -1.4172e-02, -1.4172e-02,
  -1.4172e-02, -1.4172e-02, -1.4172e-02, -1.4172e-02, -1.4172e-02,
  -1.4172e-02, -1.4172e-02]])
```

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In [42]: real_start_prices[-1]
```

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Out[42]: 20150.9
```

```
In [43]: data.post_processing(real_data[-1].reshape(ts_dim), real_start_prices[-1])
```

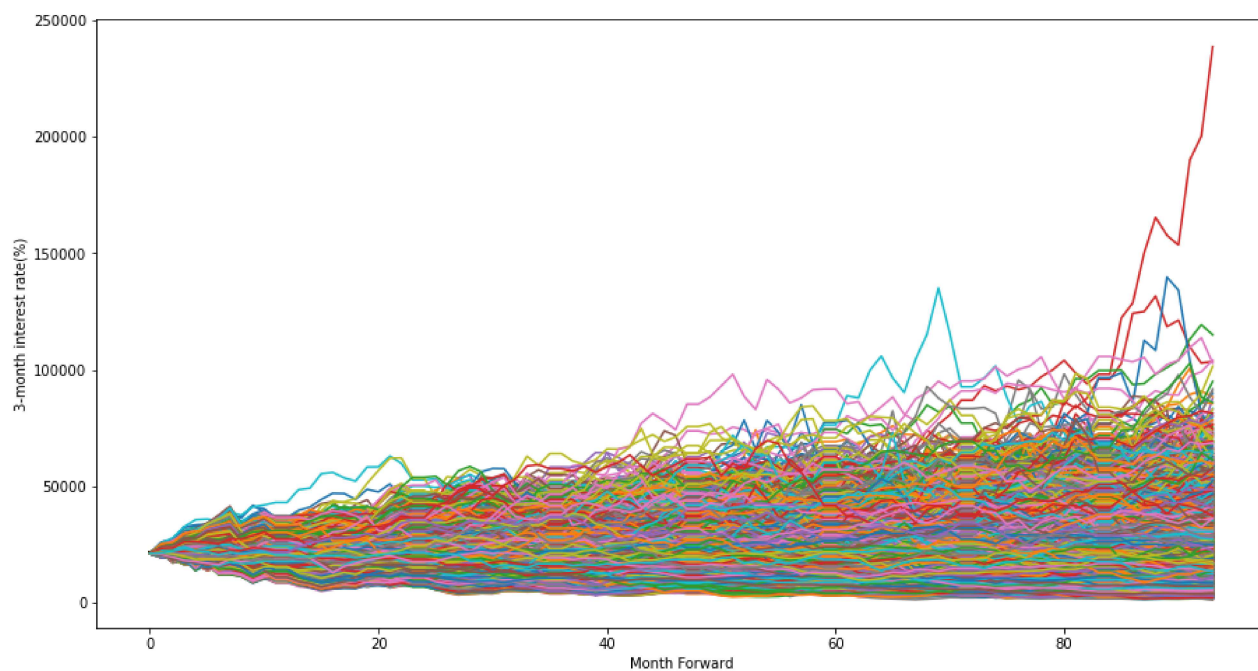


In []:

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In [69]: plt.figure(figsize=(15, 8))
for i in range(0,28000):
    plt.plot(all_simulation[i,:94])

plt.xlabel('Month Forward')
plt.ylabel('3-month interest rate(%)')
```

Out[69]: Text(0, 0.5, '3-month interest rate(%)')



In []:

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