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### 3 Stock Price Prediction

#### 3.1 The General Prediction Model

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$\tau = 1, 2, 3, 4$ ,  $\hat{f}_t$ ,  $\sigma$ ,  $700$ ,  $600$ ,  $100$

### 3.2 Prediction Results and Comparisons

$\hat{y}_t$ ,  $\hat{y}_t \sigma$ ,  $16$ ,  $\hat{f}_t$

- (1)  $12$
- (2)  $13$
- (3)

$$\sqrt{\frac{1}{L} \sum_{t=1}^L \hat{y}_t - \bar{y}}^2, \tag{10}$$

$\hat{y}_t$ ,  $\hat{f}_t$ ,  $5$ ,  $16.00$ ,  $2014$

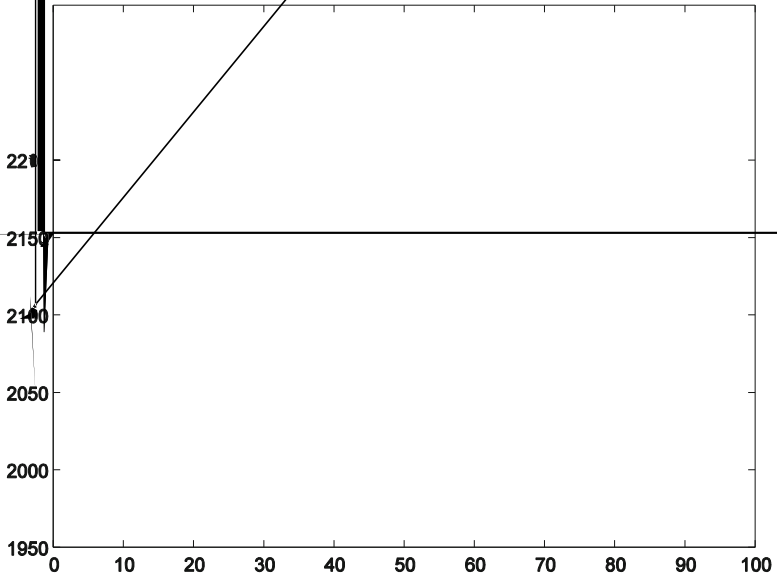
$\hat{f}_t$ ,  $1$ ,  $\hat{f}_t$

3,  $\tau = 1$ , 14, 15, 3,  $\tau = 1$ , 1

**Table 1.**

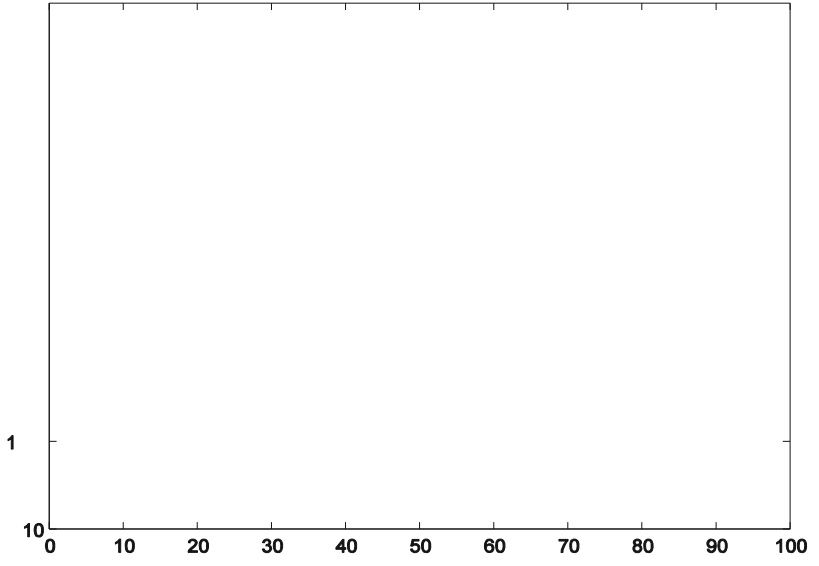
	$\tau$								
1	1	21.1033	0.2224	<b>21.2151</b>	0.2218	21.2106	<b>0.2194</b>	<b>21.5791</b>	<b>0.2204</b>
1	2	31.8031	0.3174	32.5150	0.3258	31.5760	0.3134	33.4016	0.3188
1	3	38.8045	0.3713	40.4267	0.3864	30.1431	0.3654	41.3143	0.3784
1	4	43.0104	0.4144	45.0821	0.4207	43.8047	0.4030	47.0200	0.4150
2	1	21.2464	0.2102	21.4326	0.2200	21.2870	0.2105	21.8030	0.2216
2	2	32.0100	0.3133	32.8077	0.3428	31.8553	0.3146	33.5470	0.3232
2	3	30.3107	0.3737	41.6617	0.3018	38.0136	0.3556	47.1278	0.3621
2	4	43.7612	0.3040	45.8220	0.4418	43.7805	0.4016	53.1470	0.3075
3	1	<b>21.0782</b>	<b>0.2183</b>	21.4707	<b>0.2203</b>	<b>21.0879</b>	0.2206	22.0824	0.2272
3	2	32.0317	0.3102	33.1330	0.3547	31.5318	0.3150	36.3263	0.3126
3	3	30.1218	0.3448	42.0250	0.4080	38.5402	0.3545	43.5631	0.3570
3	4	44.0140	0.3001	52.6017	0.4585	43.7351	0.3726	57.8080	0.4006
4	1	21.1804	0.2225	21.8033	0.2212	21.1461	0.2210	22.0345	0.2341
4	2	33.3603	0.3125	33.3000	0.4030	32.1045	0.3104	38.2823	0.3131
4	3	30.5780	0.3605	43.0564	0.4681	30.1205	0.3586	54.2466	0.3705
4	4	45.0405	0.4067	58.1030	0.5645	45.3620	0.3060	72.0162	0.4536

600, 2, 3, 3,  $\tau = 1$ , 100, 21.0782, 0.2183, 1,  $\pm 0.2$ ,  $\pm 0.4$ , 2, 3, 2, 6



(a)

(b)



(a)

(b)



Table 2.

1	1	59.5766	120.2869	77.7581	103.5980	84.8291	72.0887	6.6121	0.8491
1	2	77.6747	110.2947	66.0087	86.9751	60.2808	86.6801	1.9530	0.5538
1	3	89.4715	105.6588	56.4041	90.7678	71.2045	59.5331	1.3176	1.2327
1	4	110.5455	101.7635	54.8922	87.8987	82.5639	65.4218	0.3662	0.7490
2	1	72.1279	224.2375	88.2539	104.4790	97.8030	105.5201	0.7642	0.5208
2	2	93.3649	140.5822	65.2119	78.5423	122.9084	114.4137	0.7450	0.5049
2	3	112.4934	126.7071	54.1397	89.6782	101.0682	147.6291	1.2788	0.4943
2	4	152.2296	131.7796	55.6939	75.1938	101.6412	134.8176	0.3793	0.5290
3	1	176.9017	211.9905	70.8960	101.1628	129.4165	120.8225	0.7593	0.7829
3	2	115.6750	198.6486	59.2711	76.5386	127.8695	130.1543	1.2261	0.8615
3	3	115.2516	198.8352	64.5232	79.8847	126.0775	130.8770	0.7630	0.6358
3	4	130.5847	180.8102	53.0291	73.4977	117.0582	138.7150	0.3607	0.7125
4	1	247.9665	266.5358	75.6300	86.7739	153.3917	160.6503	1.2926	1.0299
4	2	146.0758	215.2569	57.9361	78.0230	155.2156	169.2637	0.7964	0.7965
4	3	81.0702	255.1925	53.7123	74.4203	155.8308	180.2085	1.2557	0.7503
4	4	129.1127	225.2805	51.6860	76.9758	149.6366	159.0454	1.8375	0.7804

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4. ... .. fi ...

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1, 2, 3, 4, 5 τ 1, 2, 3, 4

5. ... .. 5

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(a)

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## 4 Conclusion

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61171138.

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