Table 1. Simulation Experiments of Different Datasets.

Dataset	CHiLD	IDOL	CaRiNG	TDRL	Beta-VAE	SlowVAE	iVAE	FactorVAE	PCL	TCL
A	0.9014(0.043)	0.8415(0.033)	0.8360(0.045)	0.8234(0.025)	0.7495(0.005)	0.7738(0.022)	0.6035(0.023)	0.5094(0.031)	0.5126(0.027)	0.4053(0.021)
B	0.9414(0.037)	0.9381(0.004)	0.9412(0.001)	0.9420(0.076)	0.7533(0.045)	0.8575(0.065)	0.5238(0.054)	0.4171(0.055)	0.3839(0.011)	0.4038(0.008)
C	0.8347(0.012)	0.8012(0.031)	0.8024(0.029)	0.7969(0.018)	0.7483(0.017)	0.7420(0.087)	0.6149(0.023)	0.3215(0.098)	0.3286(0.034)	0.3564(0.012)
D	0.8407(0.016)	0.7645(0.055)	0.7883(0.082)	0.7713(0.003)	0.7078(0.015)	0.7384(0.057)	0.7101(0.090)	0.6794(0.048)	0.4517(0.004)	0.4615(0.010)
E	0.8619(0.026)	0.7220(0.057)	0.7280(0.023)	0.7020(0.032)	0.7160(0.024)	0.5151(0.077)	0.7228(0.040)	0.7407(0.043)	0.6211(0.027)	0.0690(0.058)
F	0.8083(0.002)	0.6867(0.029)	0.7231(0.024)	0.6779(0.078)	0.6667(0.034)	0.6848(0.066)	0.6906(0.035)	0.6296(0.009)	0.3840(0.150)	0.3193(0.024)
G	0.7622(0.004)	0.6477(0.045)	0.5916(0.028)	0.5550(0.066)	0.5435(0.015)	0.4514(0.005)	0.6172(0.005)	0.4922(0.001)	0.4477(0.011)	0.3851(0.026)

Table 2. More real-world experiment results

		ETTh	Stocks	MuJoco	fmri	Box	Gesture	Throwcatch	Discussion	Purchases	WalkDog
Context-FID Score	Clockwork VAE	0.892(0.059)	0.807(0.252)	1.010(0.195)	0.896(0.103)	0.215(0.026)	0.329(0.051)	0.284(0.025)	0.919(0.132)	1.147(0.146)	0.796(0.274)
	ChILD	0.05(0.000)	0.017(0.026)	0.026(0.004)	0.027(0.004)	0.070(0.002)	0.017(0.015)	0.045(0.041)	0.018(0.004)	0.018(0.000)	0.008(0.000)
Correlational Score	Clockwork VAE	0.070(0.001)	0.053(0.001)	0.050(0.001)	18.434(0.030)	0.215(0.026)	0.329(0.051)	0.284(0.025)	8.624(0.032)	7.741(0.055)	7.691(0.047)
	ChILD	0.002(0.000)	0.005(0.001)	0.002(0.000)	0.069(0.003)	0.021(0.002)	0.04(0.011)	0.146(0.015)	0.180(0.000)	0.127(0.001)	0.345(0.001)

Table 3. Experiment results on the climate datasets.

		Weather	WeatherBench	CESM2
	CHiLD	0.507(0.042)	0.078(0.017)	0.018(0.003)
	KoVAE	2.131(0.637)	0.171(0.032)	0.198(0.030)
	Diffusion-TS	3.826(0.915)	1.712(0.163)	0.407(0.037)
Context-FID Score	TimeGAN	6.434(1.398)	1.564(0.269)	3.255(0.232)
	IDOL	1.694(0.485)	0.239(0.030)	0.142(0.017)
	cwVAE	5.061(1.359)	0.409(0.056)	0.238(0.044)
	TimeVAE	3.910(0.858)	0.221(0.029)	0.108(0.029)
	CHiLD	0.165(0.004)	5.190(0.016)	1.250(0.009)
	KoVAE	1.620(0.012)	20.384(0.082)	10.087(0.017)
	Diffusion-TS	1.932(0.021)	63.291(0.630)	16.659(0.231)
Correlational Score	TimeGAN	3.438(0.020)	57.475(1.213)	20.641(0.082)
	IDOL	1.195(0.014)	34.773(0.059)	9.125(0.016)
	cwVAE	0.584(0.013)	34.690(0.131)	6.469(0.022)
	TimeVAE	0.707(0.005)	24.873(0.091)	6.363(0.022)