Libraries and loading the data

In [2]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

In [3]:
```
sns.set(rc={'figure.figsize':(20,10), 'axes.titlesize':18,
            'axes.labelsize':12, 'xtick.labelsize':14,
            'ytick.labelsize':14},
        palette=sns.color_palette('Blues_r',20))
```

In [4]:
```
import warnings
warnings.filterwarnings('ignore')

dateparse = lambda dates: pd.datetime.strptime(dates, '%Y-%m-%d')
```

In [7]:
```
df = pd.read_csv('All_currencies_with_returns.csv',
                 parse_dates = ['Date'], date_parser = dateparse)
```

In [9]:
```
df.head()
```

Out[9]:

	F1	Date	Symbol	Open	High	Low	Close	Returns	Volume	Market Cap
0	908	2016-08-08	BLC	0.001647	0.001726	0.001590	0.001596	NaN	164	18673.0
1	909	2016-08-09	BLC	0.001596	0.001652	0.001552	0.001552	-0.027569	143	18105.0
2	910	2016-08-10	BLC	0.001552	0.001764	0.001548	0.001716	0.105670	134	17623.0
3	911	2016-08-11	BLC	0.001717	0.001727	0.001556	0.001556	-0.093240	130	19519.0
4	912	2016-08-12	BLC	0.001555	0.001763	0.001548	0.001763	0.133033	132	17699.0

Rank by market cap

In [11]:
```
last_date = max(df.Date)
last_date_df = df[df['Date'] == last_date]
```

In [12]:
```
last_date_df['Rank'] = last_date_df['Market Cap'].rank(method='dense',
                                                       ascending=False)
```

In [14]:
```
df = pd.merge(left = df, right = last_date_df[['Symbol','Rank']],
              how='left', left_on='Symbol', right_on='Symbol')
```

Selecting top 50 cryptos 2017 onwards

In [15]:
```
top50_df = df[df['Rank'] <= 50]
```

In [16]:
```
top50_df.head()
```

Out[16]:

	F1	Date	Symbol	Open	High	Low	Close	Returns	Volume	Market Cap	Rank
11878	5	2015-08-31	SC	0.000032	0.000034	0.000027	0.000030	-0.999971	2249	148857.0	33.0
11879	6	2015-09-01	SC	0.000030	0.000032	0.000029	0.000030	0.000000	1436	139925.0	33.0
11880	7	2015-09-02	SC	0.000030	0.000032	0.000027	0.000028	-0.066667	2005	139185.0	33.0
11881	8	2015-09-03	SC	0.000028	0.000028	0.000023	0.000025	-0.107143	2991	129600.0	33.0
11882	9	2015-09-04	SC	0.000025	0.000025	0.000023	0.000025	0.000000	391	118326.0	33.0

In [17]:
```
top50_df.shape
```

Out[17]:
```
(40518, 11)
```

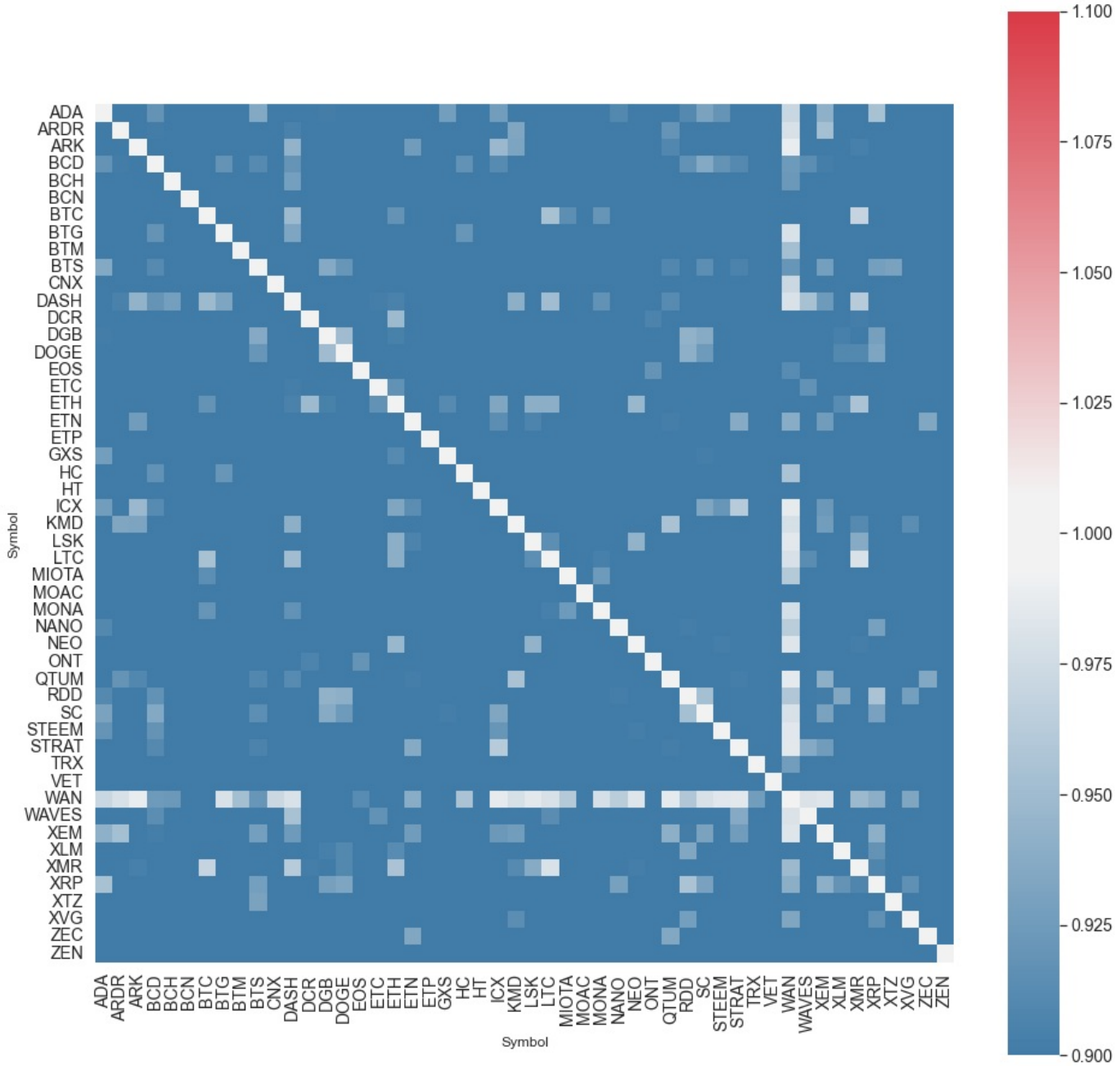
Correlation Heatmap

In [18]:
```
pivot_df = top50_df.pivot(index='Date', columns='Symbol',
                          values='Close')
top50_corr = pivot_df.corr()
```

In [19]:
```
cmap = sns.diverging_palette(240, 10, sep=20, as_cmap=True)

plt.figure(figsize = (16,16))
plt.tight_layout()
sns.heatmap(top50_corr,
            xticklabels=top50_corr.columns.values,
            yticklabels=top50_corr.columns.values,
            cmap=cmap, vmin=1, vmax=1, annot=False, square=True)
```

Out[19]:
```
<AxesSubplot:xlabel='Symbol', ylabel='Symbol'>
```



In [ ]:
```
```