

Ichimoku Kinkohyo code theory

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1 Data

Data is downloaded from <https://www.histdata.com/> and the code reads from the "M1 (1 Minute Bar) Data" Generic ASCII download format.

2 Indicator Calculations [1]

The Ichimoku Kinkohyo indicator consists of five parts;

1. Tenkan-sen (Ts), used as a singal line and support/resistance level;

$$Ts(t) = \frac{\max(close(t')|_{t'=t-8}^{t'=t}) + \min(close(t')|_{t'=t-8}^{t'=t})}{2} \quad (1)$$

2. Kijun-sen (Ks), used as a support/resistance level;

$$Ks(t) = \frac{\max(close(t')|_{t'=t-25}^{t'=t}) + \min(close(t')|_{t'=t-25}^{t'=t})}{2} \quad (2)$$

3. Senkou span A (SsA), used as a support/resistance level;

$$SsA(t+25) = \frac{Ts(t) + Ks(t)}{2} \quad (3)$$

4. Senkou span B (SsB), used as a support/resistance level;

$$SsB(t+25) = \frac{\max(close(t')|_{t'=t-51}^{t'=t}) + \min(close(t')|_{t'=t-51}^{t'=t})}{2} \quad (4)$$

5. Chikou span (Cs), used as a support/resistance level;

$$Cs(t-25) = close(t) \quad (5)$$

3 Order Conditions [1]

The order signal conditions used;

1. Buy signal, all of the following must be true along with them not all being true the instance before;

$$close(t) > Ts(t)$$

$$Ts(t) > Ks(t)$$

$$close(t) > SsA(t)$$

$$SsA(t) > SsB(t)$$

$$Cs(t - 25) > close(t - 25)$$

2. Sell signal, all of the following must be true along with them not all being true the instance before;

$$close(t) < Ts(t)$$

$$Ts(t) < Ks(t)$$

$$close(t) < SsA(t)$$

$$SsA(t) < SsB(t)$$

$$Cs(t - 25) < close(t - 25)$$

Note that both final conditions are different to decribed in [1].

For questions or comments, contact me by sending a direct message to my reddit account: s1123581321

References

- [1] Shangkun Deng and Akito Sakurai. Short-Term Foreign Exchange Rate Trading Based on the Support/Resistance Level of Ichimoku Kinkohyo. *IEEE*, 2014.