KB Securities VIETNAM

KBSV RESEARCH

Le Anh Tung
Macro Analyst
tungla@kbsec.com.vn

August 2019

IN-DEPTH REPORT

"INVERTED" YIELD CURVE – COUNT DOWN WITH FED

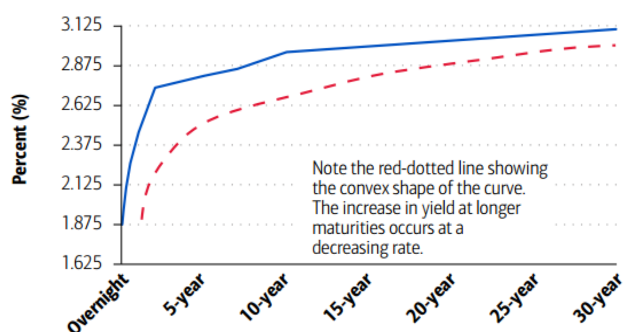
- **Inverted yield curve is dangerous, and Fed is responding slowly**
- **Fed has to cut interest rates at least twice this year**
- **If a recession occurs, the lag will be much later than that in the past**
- **The risk of a recession of the US economy is not high in 2019-2020 and the US stock market still has room for development**

BOND YIELD CURVE AND REFERENCED MATURITY PAIRS

❖ Yield curve definition

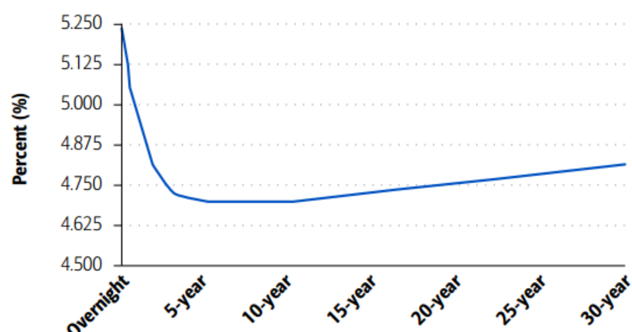
A yield curve is a chart that describes the relation between yield and maturity of bonds. In the normal environment, long-term bond yields are often higher than short-term bond yields to compensate for the potential risks of long-term bonds - including inflation, liquidity and price volatility. Then, the yield curve will have an upward sloping shape or is called a "normal" curve. In contrast, in some cases, long-term bond yields may be lower than short-term bond yields, creating an “inverted" curve with a downward direction.

Figure 1: “Normal” yield curve in September 2018



Source: Bloomberg, data collected on 12/09/2018

Figure 2: “Inverted” yield curve in January 2007



Source: Bloomberg, data collected on 01/01/2007

❖ Frequently referenced maturity pairs

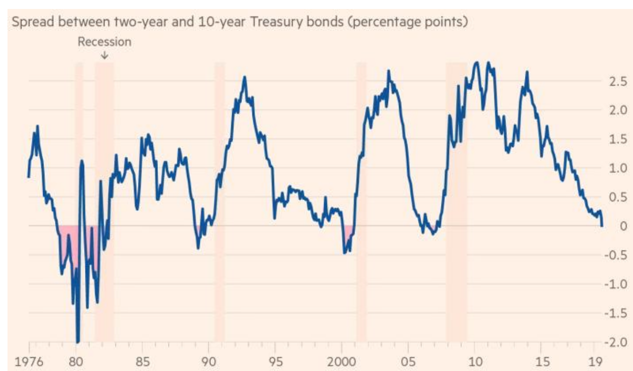
1. *The spread between **2 year/ 10 year yields (2y/10ys)***
   - 2y/10ys shows the spread between 10-year and 2-year bond yields.
   - 2y/10ys attracts the special attention from market experts, investors, asset management companies since those are the two popular maturities traded on the market.
2. *The spread between **3 month/ 10 year yields(3m/10ys)***
   - 3m/10ys shows the spread between 10-year and 3-month yields.
   - 3m/10ys is usually considered a measure for economists and policymakers (Fed) because of academic studies and the accuracy of previous economic forecasts.
3. *The spread between **Fed Funds/ 10 year (FF/10ys)***
   - FF/10ys shows the spread between 10-year yield and Fed Funds Rate (FFR).

- FF/10ys is often used by the Fed, and quite similar to 3m/10ys as the short maturity of 3m usually responds quickly to FFR movements.
- This is also a reference factor that has been officially added to Leading indicators in Conference Board Leading Economic Index.

In this report, **we will follow 2y/10ys because of its accuracy and constancy in the past.** Based on the historical data from 1978, Credit Suisse also had some notable points:

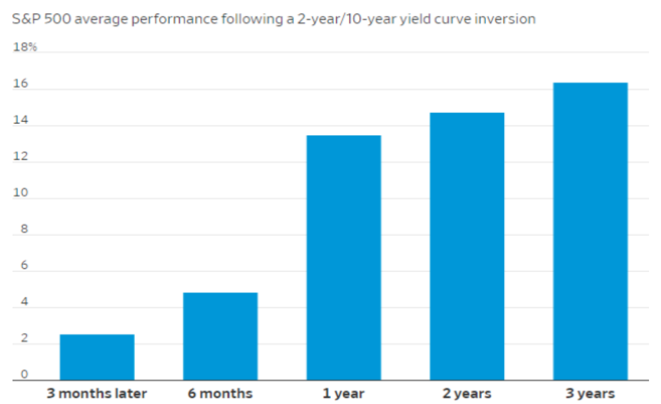
- The last 5 "inverted" 2y/10ys all led to an economic recession.
- The average period that a recession happens after "inverted" 2y/10ys is 22 months (ranging from 10 months to 3 years).
- The S&P 500 gains 12% on average in 1 year after the 2y/10ys becomes inverted.
- After 6-18 months, the US stock market will reverse and witness a negative profit growth. Of 12 times of "inverted" 2y/10ys, this indicator is an accurate forecast in 9 times.

Figure 3: "Inverted" 2y/10ys curve in the past



Source: United States Department of the Treasury, FT

Figure 4: S&P 500 movements after the 2y/10ys curve becomes "inverted"



Source: Down Jones Market Data

DRIVERS AND 2 CASES LEADING TO "INVERTED" YIELD CURVE

❖ Yield curve drivers

The shape of yield curve is decided by the two main factors: **Fed** and **market**.

To be more specific, Fed's monetary policy has the strongest influence the **short maturity side** of the yield curve since the short-term bond yields are very sensitive to Fed's FFR hikes/cuts.

In contrast, the market sentiment affects the **long maturity side** of the curve.

To put it simply, if investors believe that the US economy is currently healthy, inflation rises, they will reduce the proportion of long-term bonds (10 years) and invest more in risky assets. ro. When the demand for long-term bonds decreases, bond yields will increase (The inversely proportional relationship between bond demand and bond yields). In the contrary, if investors believe that economic prospects will be worse and inflation will decline, the demand for long-term bonds will increase, pushing bond yields of these maturities down.

In other words, when investors think that the recession is approaching, they expect the Fed to cut interest rates more, which will lower interest rates. Because of such expectations, they will accept to buy long-term bonds with low yields in return for capital gain when interest rates fall.

❖ When does an inverted curve occur?

There are two cases leading to this phenomenon:

*1. **Bear Flattener***

This is a common phenomenon in the previous inverted curve periods. A recession usually results from the Fed's rate hikes, which makes short-term yields increase faster than long-term yields (when both 2 yield curves go up – also means that bond prices are going down).

*2. **Bull Flattener***

This is a rare case of the inverted curve, which takes place when long-term bond yields decline sharply than short-term bonds (when both yield lines are declining - correspondingly, bond prices are rising.)

We believe that the first case happens when the economy has a booming growth and the Fed had to raise interest rates to cool down the economy, which accelerates the increase in short-term bond yields. The Fed's rate hikes often cause liquidity problems for the market, raise loan costs and cause disruption for some businesses. In general, **this time, FED is the main reason**.

Meanwhile, the second case is mainly due to the pessimistic sentiment of the market about a recession, which leads to expectations/predictions about the downtrend of interest rates. In addition, the possibility of an interest rate cut of the central bank will trigger a stronger plunge in long-term bond yields. In general, this time, it was not the Fed, but the **pessimistic sentiment of the market that is the dominant factor.**

SPECIAL THINGS ABOUT THE INVERTED CURVE THIS TIME

❖ Situation

Early Wednesday morning (21/08/19), the inverted yield curve did occur with the 2y/10ys – for the first time since 2007. Although this "inverted" phenomenon only happened in a short time when the liquidity was low, this could be considered as an early warning for the market. The situation was excavated when 30-year bond yields of the US hit the lowest level in history.

HSBC also stated some noticeable observations of the bond market:

- Sudden moves during low-liquidity months (as in this August) are likely to cause an "inverted" yield curve.
- An "inverted" yield curve has never occurred in a low liquidity environment.

Considering the two above cases, the **inverted curve this time is classified as the case of *"Bull Flattener"***. On the other hand, most of inverted curves in the past are classified as *"Bear Flattener"*. As a result, we want to emphasize that **pessimistic sentiment is the dominant factor on the market.**

Figure 5: Special bond yield curve of the US in current time

Source: Bloomberg

❖ Reasons

The market sentiment is very negative with increasing risk averse, which reflects concerns about a slowdown in global and the US economies, and may also lead to a recession for the US economy in the coming time.

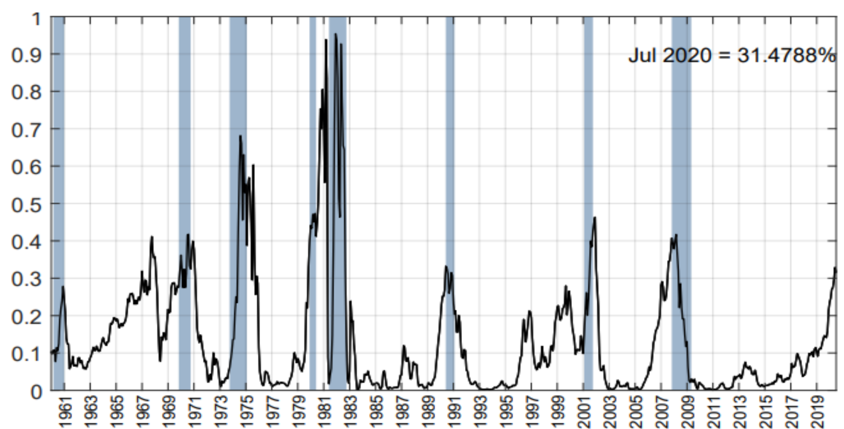
- The global economy continued to show worrisome signs. GDP in Q2 fell to a negative level in Germany, England, Singapore, Hong Kong, and Sweden. Furthermore, economic data in China were also disappointing, with a growth lower than expected in July in credit

growth, industrial production, investment spending, and retail sales. At the same time, the global economy is still facing with the pressure from the US-China trade war and hard Brexit, which makes the global economy hardly keeps the rebounding trend in the near future.

- It is difficult for the US economy avoid a slowing growth in Q2. Besides, investment activities which surged previously (at the end of 2017 and beginning of 2018) thanks to tax cut incentives in 2017, has seen a noticeable slow, and even decreased in the last Q2.

The concerns of a recession are further increased when investors look at the recession indicators of the New York Fed. The New York Fed built a set of recession indicators over the next 12 months based on bond yield curves. The latest data show that a potential recession is approaching with alarming indicators. In other words, if the recession did not occur, this would be the highest probability of crisis signal without leading to a crisis in the last 50 years.

Figure 6: Recession possibility based on yield curves of Fed New York



Source: Federal Reserve Bank of New York

ARGUMENTS ABOUT THE CURRENT INVERTED CURVE

❖ Effects of QE programs

Two well-known economists, former Fed Chairmen Ben Bernanke and Janet Yellen, recently made statements that underestimated the reliability of the "inverted" curve indicator this time in predicting a recession. "*... the reason for that is that there are **a number of factors** other than market's expectations about the future path of interest rates that are pushing down long-term yields,"* Yellen told Fox Business Network. The other factors that affect the market mentioned here is the QE = program and law changes.

In the economic recession in 2007-2008, Fed started a program to buy Government bonds whose longest terms as ever on the market, which pushed the long-term bond yields down. Although Fed has also cut its Balance Sheet, the decreased amount is still low, and the size of this BS is still very large.

Therefore, it is likely that the Fed's bond purchase strategy caused a fall in long-term bond supply on the market, and made long-term yields (particularly 10-year term) seem to be lower than their real value.

Fed used **"term premium"** for an explanation, it believes that QE may affect "term premium" and may distort the relation between yield curve and the economic cycle. In other words, long-term bond yield is determined by investors' expectations about interest rates and "term premium" – additional rates to offset the risks of inflation, interest rates, liquidity and credit. In December last year, Ms. Yellen shared that "term premium" was currently low, close to 0, implying that yield curve is more likely to be relaxed than in the past, so this curve is prone to be "more inverted."

Besides, another argument is that when FFR stays low as the current level, low long-term interest rates do not necessarily reflect the negative prospects of the economy but simply reflect a normal new interest rate level.

If previous "inverted" curves occurred in a high interest rate environment, the inverted curve this time occurred in a low interest rate environment – which has been never recorded in history. Therefore, although there are many alarming and unstable signals, many economists denied the possibility of a looming recession in the upcoming period.

❖ "Yield hunting"

Another former chairman of the Fed, Mr Alan Greenspan, recently pointed out that: *"There is international arbitrage going on in the bond market that is helping drive long-term Treasury yields lower. There is no barrier for U.S. Treasury yields going below zero. Zero has no meaning, besides being a certain level."*

The international arbitrage that Greenspan mentioned is the increase in the purchase of long-term bonds of the US by foreign investors, especially by insurance companies because the gap between the US bonds and the rest in the world is large and attractive. According to Deustche Bank, about USD15 trillion of Government bonds on the global market (about 25% of the total market), are being traded with negative yields. This figure tripled compared to the one recorded in October last year.

There has been no signal showing the global bond environment in the upcoming period. In contrast, ECB is likely to continue cutting interest rates and restart QE progress although their FFR is currently at a negative level. In Germany, 30-year Government bonds have plunged to a negative level for the first time in history. Due to the effects of global monetary easing, the demand to buy US bonds will still be high; and the downtrend of US 10-year long-term bonds may still happen in the upcoming period.

ASSESSMENT FROM KBSV

❖ Inverted yield curve is a dangerous phenomenon and the Fed is responding slowly

We want to emphasize that the **“self-fulfilling prophecy”** of the “inverted” curve – means if the market forecasts and believe that a recession is coming, this belief will lead to a real recession. Other research by Fed New York published on 2010 also said that the “inverted” curve will make long-term yields decrease, thereby reducing profit margin gained from long-term credit accounts of financial companies, especially banks. This is the reason why they do not want to expand the Balance Sheet by providing new lending capitals. Consequently, credit supply is tightened, which increases the risks of recession.

There are many lessons in the past when the Fed ignored the market, leading to a recession. Specifically, before the 2008 crisis, the Fed had implemented the process of raising interest rates with the expectation to increase long-term yields. However, long-term yields decreased, leaving the Fed unable to find a reasonable explanation - the then Fed chairman, Mr. Greenspan called that a "**conundrum**" - and said that the bond market was showing unreasonable signs. Therefore, when the bond curve was "inverted" in December 2006, the Fed and economists ignored this signal. The FFR remained unchanged at 5.25% until June of the following year before they admitted that the economic outlook was not positive and cautiously lowered interest rates. The United States then entered a recession at the end of 2007 while the FFR was still high at 4.25%. Although the Fed reacted strongly after cutting interest rates, it did not save the US from a deep recession which later turned into a crisis. What can be seen is that the Fed tightened monetary policy for too long and loosened too late.

Back to the current situation, some similar signals can be noted when Fed raised their rates at the end of last year, but long-term bond yields gradually climbed. Although Fed later did stop the rate hike, and turned to cut rates by 0.25%, this move was still quite prudent, and not influential enough to satisfy the market, further bringing 10y yields of the US down. The inverted curve re-appeared, which clearly means that Fed is lagging behind instead of going ahead of the market.

❖ Fed has to cut interest rates at least twice this year

We think that Fed will barely avoid the low interest rate trend, or even negative on the global market. The pressure from international arbitrage is high, which will narrow the gap between the US bond yields and other countries’ yields. In addition, we have noted that the current financial market is becoming too large (partly because QE has raised the value of the assets), which may create a gap between the financial market and the economy. In a global environment, although the US economy does not show an obvious sign of recession, Fed has no choice except for cutting rates because strong

volatiles on the financial market will leave unpredictable consequences to the economy.

In order to maintain a safe yield curve, and to avoid the occurrence of "inverted spans", FED needs to cut interest rates further (maybe 4 more times - equivalent to an additional 1% reduction to pull FFR down to 1.125%, compared to 1.6% of the current 10-year yield) to meet expectations and build market confidence. Overall, we can expect this time the Fed has been more reflex to send signals that they will surely make drastic changes if necessary.

❖ If a recession occurs, the lag will be much later than that in the past

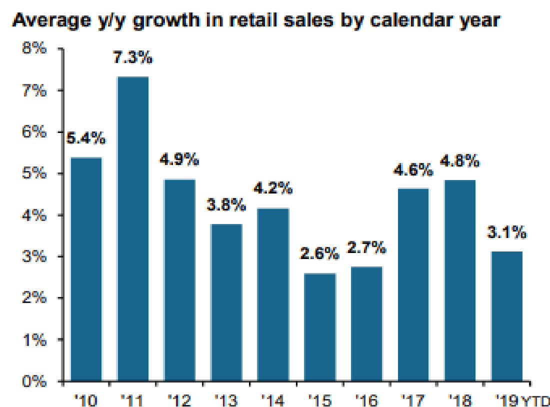
This US economic recession may occur if the Fed continues to be "lag" behind and some risks, especially trade war, continue to increase the pressure on economic growth. However, in general, we believe that the lag from the "inverted" phenomenon happened until the actual recession will be further prolonged, based on two reasons:

- The "inverted" phenomenon this time, apart from the pessimistic sentiment of the market, resulted from the expectations of FED's ability to cut interest rates. Therefore, when the Fed takes action and cut interest rates down enough as expected by the market, long-term bond yields will decrease and may even appear short rebound spans. Then the inverted interest rate phenomenon will temporarily be solved, thereby helping to reassure market sentiment. As market sentiment is improved, the "**self-fulfilling prophecy**" effect mentioned above will no longer exist and the US economy will be able to prolong the growth cycle.
- We also agree with the above two arguments saying that the QE programs and the tendency to hunt for high yields have led to the US long-term bond yield being at a relatively lower level. The inverted phenomenon may have occurred earlier than usual, which means that the indicator of the possibility of a recession appeared earlier. Therefore, the lag until the recession will be able to last longer.

❖ The risk of a recession of the US economy is not high in 2019-2020

Despite observing that the US economy has a slowdown in growth, we have not yet seen any signals of a looming recession. The consumption sector still shows stability and sustainability. Specifically, the growth of retail sales (accounting for 43% of the consumption) was still very positive, increasing by 0.7% m/m in July and reaching 3.1% YoY, despite losing the stimulus from the tax cut policy. The strong growth of this sector - the foundation of the US economy (accounting for 2/3 of GDP), will compensate for pressures from the rest of the economy, thereby helping the US economy still be able to achieved positive growth this year.

Figure 7 : Annual retail sales of the US



Source: Bloomberg, JP Morgan

Thus, if the US economic recession happens, it will result from the recession in other countries around the world. The process of globalization makes the interaction and dependency among countries increase and cause risks to the US. We think that the important "semiconductor" will be the Dollar. The US economy stands out from other countries, along with the gap between US bond and other developed countries (especially the EU), which will strengthen the Dollar. This will adversely impact the profitability of US businesses, combined with the decrease in the competitiveness of exporting businesses in this country, will push the US economy down. However, it should be noted that, historically, there have been no cases in which global factors put the US under the pressure of recession.

So, the big question now is, from which country will the recession come from? We are somewhat concerned about the Chinese economy with signs of Chinese credit growth and contraction. However, these signals are not clear enough to identify a long-term trend. Although we have noted that the world economy is in trouble, we still believe that the upcoming monetary easing policies from the EU, China and the US will prolong the recovery cycle, at least by the end of 2020. Meanwhile, the sentiment of bond market will have a certain recovery, instead of at the extreme state as at present.

Figure 8: Credit growth in China

Source: Bloomberg

❖ US stock market still has room for development

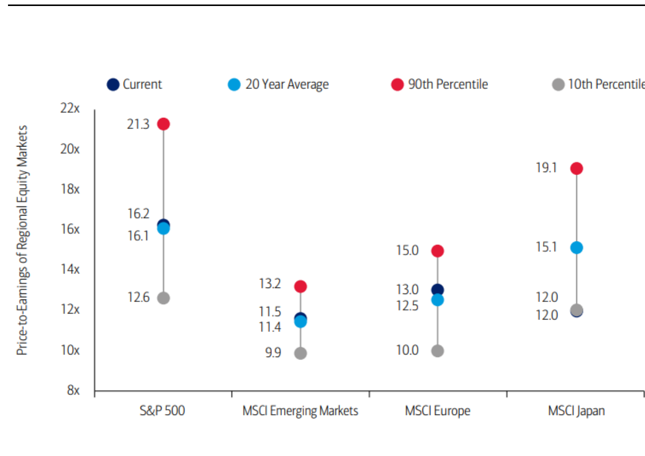
Investors on the US stock market are currently in a challenging investment environment, while concerns about economic outlook and geopolitical risks increasingly dominate the market movements. However, the global low-interest environment and loosening monetary policy in the upcoming period make the US bonds and cash become less attractive. Furthermore, signals about the recession or about the "inverted yield curve" mentioned above are quite vague, with long lag and uncertainty.

Particularly in the past, even when a recession really happened, the US stock market still had positive moves in 6-18 months after the yield curve was "inverted". Bank of America also pointed out that the US stock market growth has still been at a reasonable level up to now (Figure 9).

With the above arguments, we think that it is not a rational strategy to keep an extremely prudent viewpoint (focusing too much on safe assets.) Instead, the right allocation between risky and risk-free assets in the portfolio will be a reasonable strategy when balancing opportunity costs and risk factors at the moment.

Besides, with the current "inverted" shape of the US bond yield curve ("Bull Flattener" model), Blackrock also gave some investment recommendations for each sector based on historical data in the past 20 years of the US stock market (Figure 10). Accordingly, Healthcare and Utilities are the two sectors that witnessed positive moves in a "Bull Flattener" environment.

Figure 9: Global stock market value



Source: Bloomberg, Bank of America; Data on 14/08/2019

Figure 10: Yields of each sector based on the shape of yield curve bond

Average 6 Month Return				
Yield Curve Regime	*Risk On*			*Risk Off*
	Bear Steepener	*Bear Flattener*	*Bull Flattener*	*Bull Steepener*
S&P500	**10.9**	**5.8**	**5.6**	**(5.5)**
Technology	14.9	12.1	9.0	(9.3)
Energy	12.3	8.8	1.4	(2.3)
Real Estate	7.6	6.5	7.1	(9.7)
Industrials	14.7	5.2	4.6	(4.9)
Consumer Discretionary	16.2	5.0	6.2	(6.3)
Materials	15.7	4.6	1.1	(3.8)
Financials	13.3	4.1	5.2	(5.9)
Health Care	9.1	3.5	8.0	0.7
Consumer Staples	6.3	2.9	5.8	1.4
Utilities	3.6	2.8	7.3	(4.2)
Telecommunication	6.0	1.0	6.7	(8.2)
Equity Sector Breadth				
% of Positive Returning Sectors	100%	93%	93%	25%
% of Negative Returning Sectors	0%	7%	7%	74%

Source: Thomson Reuter, Blackrock

KB Securities VIETNAM

DISCLAIMER

This report has been prepared for informational purposes only, and does not constitute an offer or solicitation of a contract for trading. Opinions in this report reflect professional judgment at this date based on information and data obtained from sources KBSV considers reliable. However, KBSV does not guarantee that the information and data are accurate or complete, and, therefore, this report is subject to change without prior notice. Individual investments should be made based on each client's own judgment and we expressly disclaim all liabilities for any investment decisions and any results thereof. This report is a copyrighted material of KBSV and, thus, it may not be reproduced, distributed, or modified without the prior consent of KB Securities. This report is not prepared for academic purposes and any third party wishing to quote from it for academic publications should receive the prior consent of KBSV.

KB SECURITIES VIETNAM (KBSV)

Head Office:
Floor G, 2&7, Sky City Tower, 88 Lang Ha Street, Dong Da District, Hanoi, Vietnam.
Tel: (+84) 24 7303 5333 - Fax: (+84) 24 3776 5928

Hanoi Branch
Floor 1, VP Tower, 5 Dien Bien Phu Street, Ba Dinh District, Hanoi, Vietnam
Tel: (+84) 24 3776 5929 - Fax: (+84) 24 3822 3131

Saigon Branch
Floor 1, Saigon Trade Center, 37 Ton Duc Thang Street, Ben Nghe Ward, District 1, HCMC, Vietnam
Tel: (+84) 28 7306 3338 - Fax: (+84) 28 3910 1611

Ho Chi Minh Branch
Floor 2, TNR Tower Nguyen Cong Tru, 180-192 Nguyen Cong Tru Street, District 1, HCMC, Vietnam
Tel: (+84) 28 7303 5333 - Fax: (+84) 28 3914 1969

CONTACT INFORMATION

Institutional Client Center: (+84) 28 7303 5333 - Ext: 2656

Private Customer Care Center: (+84) 24 7303 5333 - Ext: 2276

Hotmail: ccc@kbsec.com.vn

Website: www.kbsec.com.vn