

## TCE or not TCE, That is the Question

Paraphrased from Shakespeare's Hamlet – circa 1600

It is difficult to keep re-inventing the wheel in order to sell more newspapers, yet how else does one explain the creation of Tangible Common Equity (TCE) as the new preferred method of analyzing a bank's balance sheet. TCE is broadly defined to be the bank's Equity Capital less the book value of its issued Preferred Stock and Intangible assets, such as Goodwill. If you are a student of Graham and Dodd, then this is the perfect metric to seek out "paying nickels for dimes". However, the use of this ultimate "worst case" scenario to analyze a Capitalistic risk-taking venture will usually limit one to investing almost solely in cash.

Using the sample bank balance sheet below, let's review how the FED's recent effort to support the banking system, via the expansion of its footings, could potentially worsen the situation if TCE is the sole measure of health for our Financial system.

Risk Wgths	Assets		Liabilities	
100%	Comm Loans	675	Deposits	625
20%	GSE MBS Securities	150	Tsy Repo	100
0%	Tsy Reverse Repo	100	Long-term Debt	150
0%	Reserves at FED	50	Preferred Stock	50
100%	Goodwill	25	Equity	75
		1000		1000
	Assets	1000	Tier 1 Capital	125
	Tangible Assets	975	Tangible Common Equity	50
	Risk Weighted Assets	730		
			Tier 1 Ratio	12.5%
			R-W Ratio	17.1%
			TCE ratio	5.1%

For simplicity, we only look at a single bank with a rather straight-forward balance sheet. Moreover, we assume that this is the ONLY bank in the nation so that FED activity impacts it as it would affect the Financial system as a whole.

### **Assets:**

Commercial, Industrial and Real Estate Loans, a banks bread and butter business;  
Securities holdings, including Treasuries, FN's, FH's, FHLB's, etc;  
Assets taken onto the balance sheet via short-term Repurchase agreements;  
Required reserves held at the FED;  
Goodwill and other intangible assets.

### **Liabilities:**

Retail and Commercial Deposits;  
Funding of short-term Repurchase agreements;  
Long-term Debt;  
Preferred Stock;  
Common Equity, Additional Paid in Capital, Retained Earnings.

### **Basic Calculations:**

Tier 1 Capital (Equity plus Preferred) of 125 divided by total assets of 1000 creates an Asset ratio of 12.5% or a leverage ratio of 8:1.

Using "Risk Weighted definitions", Total Tier 1 Capital of 125 divided by Risk Weighted assets of 730 creates a ratio of 17.1% or a leverage ratio of 5.8:1.

Tangible assets of 975 divided by Tangible Capital (Common less Goodwill) of 50 creates a TCE ratio of 5.1%

The broad Total asset ratio captures the big picture of the overall risk exposure of the institution. This needs to be the central limiting factor. While the bank may engage in low-risk, balance sheet heavy "arbitrage" (such as Repo or Treasury holdings), the cold reality is that in times of extreme stress, the liquidity for even truly riskless assets is impaired. Within this framework, Risk-weightings are a nice disclosure to detail a banks exposure to the ordinary risk of doing business. After all, companies (Commercial loans) do default even when times are flush.

This brings us to the "belt and suspenders" metric of TCE. Eliminating Preferred stock from the Equity calculation is overly cautious to the point of absurdity. Unless the Preferred dividend is cumulative, the preferred holder is just barely above the common stockholder in the capital structure and has few claims on

recovery cash flows. It is subordinate to most debt and is issued primarily as a higher yielding asset for passive income oriented investors. In all but name, it is a long-term “covered call” strategy. The company is in essence issuing common stock in combination with buying back a long-dated (perpetual) call option struck at the issue price. This is a fine structure for a certain class of investors, but since they are taking “equity” downside risk in exchange for a higher coupon, the issuer should certainly receive “equity” credit. (Look up the old “Primes” and “Scores” product from the 1980s to refresh your memory as to why Preferred stock is absolutely Equity.)

As per the requirement of subtracting Goodwill and other intangibles, the more pertinent question should be directed to FASB as to why it allows the retention of Goodwill on the Balance Sheet at all if it is such a suspect asset. We propose that since there is value to an on-going concern above and beyond its replacement cost (See Tobin’s Q-Theory), there should be a place on the balance sheet for Goodwill, the only question is how much. But to discount it completely is just simply too draconian for reasonable purposes. If you insist on this much surety before investing, your mattress is probably the best place for excess cash.

In any event, via the “Magic of Meredith”, TCE is now the preferred vector of risk. So let’s see how recent FED actions have actually added stress to the system.



The FED has been aggressively adding liquidity to the system via the expansion of its Balance Sheet. It is accomplishing this the old fashioned way, by purchasing securities in the open market for its own account. Let's follow a simple example of this open market operation:

[For ease, we have reduced the number of players to a single **Asset Manager** who represents the investing public, a single **Bank** that performs all intermediation functions, and the **FED**.]

The **FED** decides to buy 200 MBS in the market. It announces its intentions and at an agreed upon price, the **Asset Manager** sells. His account at the **Bank** is reduced by 200 MBS and is replaced by a deposit of 200.

Acting as agent, the **Bank** passes along the 200 MBS to the **FED**. The **FED** takes the bonds and credits the **Bank's account** at the **FED** with 200 of Reserves. These reserves are created with a "wave of the hand" by the **FED**. (This is the famous "Helicopter" function.)

To Summarize:

The **Asset Manager** has swapped MBS for a cash deposit. The **Banking System** has increased its footings on both sides as it now has a 200 asset (deposit) at the **FED** and a 200 liability (deposit) with the **Asset Manager**. The **FED** owns an asset of 200 MBS and has a liability to the **Banking System** of 200 via a Reserve deposit.

Let's take an ex-post look at our bank's balance sheet:

Risk Wgths	Assets		Liabilities	
100%	Comm Loans	675	Deposits	825
20%	GSE MBS Securities	150	Tsy Repo	100
0%	Tsy Reverse Repo	100	Long-term Debt	150
0%	Reserves at FED	250	Preferred Stock	50
100%	Goodwill	25	Equity	75
		1200		1200
	<b>Assets</b>	<b>1200</b>	<b>Tier 1 Capital</b>	<b>125</b>
	Tangible Assets	1175	Tangible Common Equity	50
	Risk Weighted Assets	730		
			<b>Tier 1 Ratio</b>	<b>10.4%</b>
			<b>R-W Ratio</b>	<b>17.1%</b>
			<b>TCE ratio</b>	<b>4.3%</b>

Seemingly, the actions described above should have had no impact upon the bank (i.e., banking system, remember, we only have one bank in our example). Yet using TCE as the sole risk metric, the bank is now in substantially worse shape.

The FED's actions have "grossed up" the balance sheet of the bank. On the asset side, the Reserves held at the FED increased from 50 to 250 while Deposits increased from 625 to 825. Since Total equity did not change, the overall leverage ratio of the bank declined from 12.5% to 10.4%. The banking system is MORE leveraged (and in theory riskier) despite there being no obvious increase in risk.

This is where the Risk-weighted ratio comes in handy. Because deposits at the FED are by definition riskless, this measure of risk shows no change at 17.1%.

Now let's look at the TCE ratio. Similar to above, the increase in overall footings with no change in the TCE reduces the ratio from 5.1% to 4.3%, a substantial, and potentially actionable change. Since the TCE ratio has taken on a life of its own with the Government now using it as a yardstick, this is serious stuff. Effectively one arm of the Government, the FED, believes it is taking actions to reduce risk in the banking system while another arm, the Treasury, believes the system is at more risk (via the lower TCE ratio) and may request an increase in Capital. Moreover, the most frequently cited solution is to convert Preferred stock to Common equity. As noted previously, this "shuffling of the deck chairs" will have absolutely no economic impact yet will certainly make issuance of Preferred stock in the near future more difficult (expensive). Since reducing avenues of risk distribution is a negative for the system, this is simply not good public policy. The only Economic reason to convert Preferred to Common is to reduce the negative cash-flow of the dividend, but that can usually be accomplished by omitting the dividend for a short period of time.

The fractional banking system, by its very nature, is NOT consistent with a full blown mark-to-market paradigm. Lending long-term (mortgages, etc.) versus borrowing short-term (deposits) on an eight to one leveraged basis cannot be collapsed at will. This is why the Government provides FDIC insurance – to mitigate the possibility of a bank run. Consequently, the notion of TCE as a measure of risk for an on going concern is not a viable metric. Capitalism is all about taking measured risk for a proper return.

As my old boss used to say: "If you never lose money, you are not taking enough risk."

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