

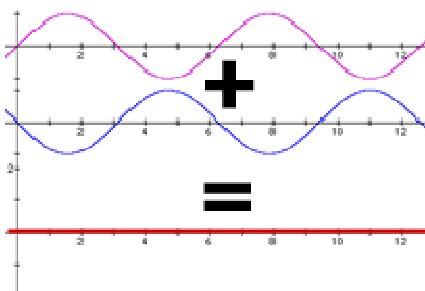
REVENUE AMPLIFICATION THEORY

By: Ryan Addis December 5, 2007

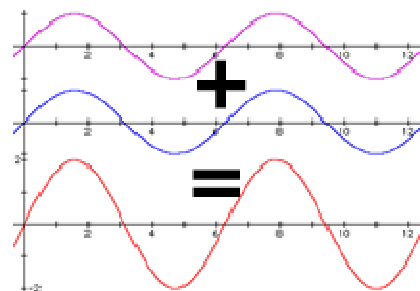
Leverage is a common topic when discussing revenue. It conjures a picture of a big bar over a little rock providing a long handle to move even larger objects. Banks use leverage by borrowing against their deposits to loan out more money than they have. Since they borrow for less than they lend, they make more money than just the spread between deposit rates and interest charged alone. Are there other abstract concepts such as a long pole and a rock that could be applied to revenue?

After the tsunami in Thailand in 2004, I started thinking about wave theory. As a tsunami approaches shore, the raise on the sea bottom shortens the wavelength thus increasing the amplitude (height) of the wave. So what could be the “sea bottom” for a company that will increase amplitude? One answer is inventory turns. If a company can continually turn inventory, it can shorten the wavelength of orders (duration that cash is out of hand) and thus reinvest cash at a faster rate. Maintaining this increase in amplitude results in a tighter waveform (or frequency) that can be advantageous because it increases the cumulative return.

Things get really interesting in wave theory and companies alike when combining two waves. With light, matching waves by their frequency and phase (think of synchronizing) can lead to directional and concentrated photons (laser) vs. the random distribution of light that we see everyday. Companies often combine waves by putting two businesses together that operate on opposite sides of the same cyclical market. Imagine a rain jacket company and a suntan lotion company under the same corporate structure. This is called phase cancellation and it is used to stabilize earnings. Now this is where the heart of my theory lies. What if you were to combine two synchronized (in-phase) units thus applying constructive phase interference to amplify revenue among business units?



Phase Cancellation

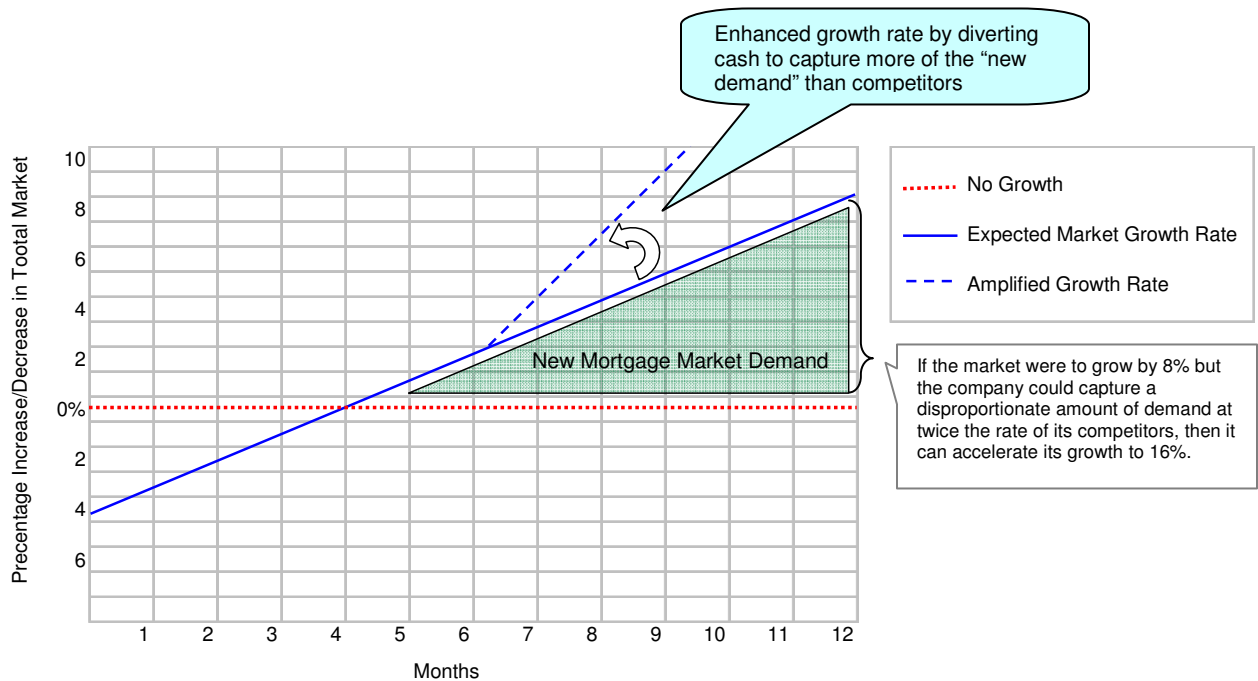


Constructive Phase Interference

As you can see in the illustration, constructive phase interference has higher highs and lower lows. Most companies would prefer to stay away from this because the lows can be very low. They also prefer to stay away from combining a business with little growth but steady with a company that has big growth and is volatile. The thinking is that the low growth company weighs down the earnings of the high growth opportunity. However, what if the low growth company could be used to siphon cash into the high growth company at an opportune time? If a prevailing opportunity were big enough, I propose that timing the cycle of a seasonal (or market) adjustment might lead to amplified results.

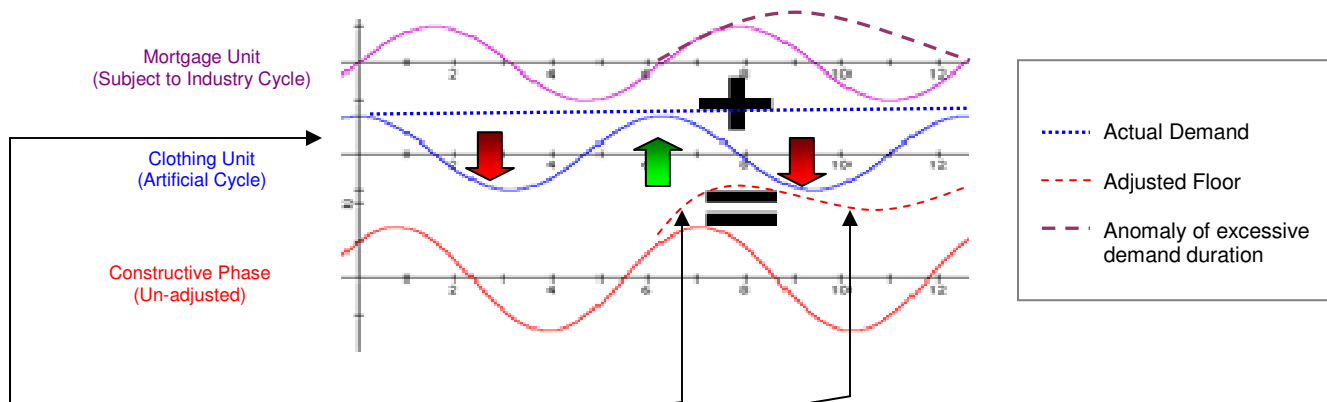
Suppose the mortgage industry is facing an anomaly of refinance activity anticipated from market conditions and seasonal forces converging at the same point in time. You are the

CEO of a company with two business units; one mortgage related and the other a tropical shirt manufacturer. The shirt manufacturer is not growing at any wonderful pace but it has carved a small niche of loyal purchasers which yields steady cash-flows. The mortgage company (which uses huge leverage by borrowing (as in the bank example above) has been in a down cycle and market correction. After right sizing, the mortgage unit is stable but has not retained a lot of cash. As CEO, you have a choice to take the profit as distributions from both companies individually or to funnel the profits of the clothing company into the mortgage company. The former option allows for “business as usual”. In a flat market with all things being equal, taking the latter action will probably produce modest results at best. The mortgage company’s leveraged model can potentially increase earnings but it will lose them even faster if the market turns for the worse (the curse of over-leverage). So, here’s where the timing comes in. Since, a rising tide raises all ships; the first option will see the shirt company remain flat while the mortgage company increases at the rate of the overall market increase. The latter example will see the profit transferred to the mortgage company where the cash can be utilized to potentially grab more of the rising tide than competitors (similarly cash-distressed) are able to do so. In other words, the mortgage company’s extra cash infusion lets it pick up much more of the new low hanging fruit than other companies can. To be fair, this implies a major assumption that the mortgage company’s cost to take a client from a competitor is very expensive and the cost to meet new demand is significantly reduced. The potential effects are illustrated below:



So it would appear common sense that the prudent choice is to take the latter option and funnel cash from the shirt company into the mortgage unit. There is one looming issue; the combined decrease of both units creating an even larger downside risk. To address this, timing is again paramount and the revenue amplification theory is broadened in that “control” of the timing becomes central. A key to success would be to take the steady cash flow (imagine a flat line) of the shirt company and to pull as much cash out as feasible so as to allow it to maintain the ability to return to its previous revenue threshold when the cash is no longer siphoned out. With this given control and the previously stated assumption of cost benefit in meeting new demand, we can place collars that can hedge against a significant compounding drop. The benefit is that the

contraction can be artificially timed into a period of strong demand to create a floor. Additionally, since the revenue depression in the clothing company was artificial, it can be replaced when needed without waiting on the winds of the industrial cycle. Herein lays another assumption; if the shirt company was subject to drastic fluctuations in the clothing industry, it would not make a suitable pairing. The constructive phase interference and collars are illustrated below with the units only slightly in phase with one another.



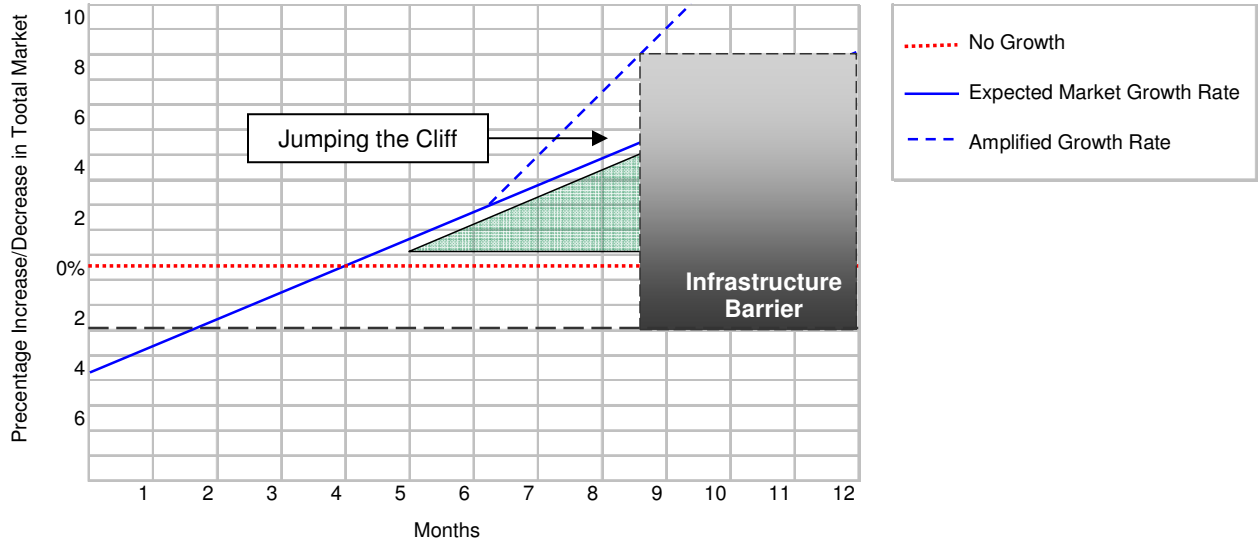
An artificial floor is created from the combined effect of returning the clothing unit back to previous revenue levels prior to the decline in the mortgage cycle. The floor is further supported by the anomaly of excessive demand duration caused by a convergence of a refinance wave and seasonal increase.

Increased growth (amplitude) results from the constructive effects of combining the Mortgage and Clothing unit cycles seen in the solid lines. The dashed line reflects the hypothetical outcome of the levered reinvestment of the Clothing unit's cash flow into the mortgage unit.

The Clothing unit is used to finance the mortgage industry indicated by the first red arrow. To avoid a compounding decline, the cash drain is taken off before the fall of the mortgage cycle indicated by the green arrow. During the mortgage industry decline, a second cash-infusion can be used to solidify the mortgage unit's market position as a consolidator or to defend share.

As the above illustration depicts, the two units are manipulated to be only slightly in phase with one another. The result is what's called a sinus-phase wave. This is significant because the upside and downside do not have as much volatility as when they are perfectly in-phase and because the combined wave is naturally out of sequence with both of the other units. This latter effect can be important in regards to timing. Think of intentionally timing a surge in access to cash at an opportune moment when competitors that are simply following the industry cycle can't compete. Why would this important? One application is in what I call "cliff jumping". For some reason, it is common that companies of a certain size have trouble breaking into the next tier. For some, this barrier may be caused by a need of new management systems and talent. For others, it may be the size of capital re-investment required to reach that next level. So, let's say our mortgage company could cut its operational expenses by 20% if it invested in an imaging solution

to store all of the paperwork it manages. The problem is that the unit needs to be a certain scale to make the benefits hit their benchmark. The company could compress margins and drive up sales depleting cash along the way to reach scale. However, the stressed situation of the firm in this growth phase could cause any disruptions to be disastrous. Alternatively the firm could use the revenue amplification theory to bolster earnings while maintaining or expanding margins to help it reach the next plateau where it can sustain at a more normalized growth rate.



If the revenue amplification effect is valid, it may be a cause for unique combinations of business types never before thought of and presenting a new challenge; how to manage such oddly paired business. If utilized correctly however, I hypothesis that this theory may be a significant tool for the consideration of corporate strategy.