04 Sep 2018 17:52:57 ET | 19 pages

Strategy
Global

Global Multi-Asset View

For Whom The Clock Ticks: How Long Till End-Cycle?

- **Late-cycle, or end-cycle?** — If there's one thing all investors want to know, it's how long till the next bear market.
- **One cycle, two opinions** — Current opinion is deeply divided. A flattening yield curve and extended corporate debt levels point to end-cycle. But strong profit growth, low rates and still-tight credit spreads suggest room to run.
- **A central banker in the works** — But this cycle looks different. Corporate leveraging has not led to spread widening. The obvious culprit is global QE. Matt thinks this has messed up the traditional credit/equity clock. Rob thinks it simply held it back.
- **The clock ticks for thee** — The guidance from prior bear markets is inconclusive. Many metrics already look rather stretched – but there is no "magic level" at which markets consistently roll over. We suspect the debate will continue raging until well after the bear market has actually started.
- **It's all about timing** — We both think we are somewhere in Phase 3 (or 6-9 o'clock in the credit/equity clock). But Matt thinks we are close to 9 o'clock, suggesting that a bear market is imminent. Rob thinks we are nearer 7, suggesting it's still too early to make that call.

Please vote for us in the All Europe Institutional Investor Survey 2019 under Equity Strategy.

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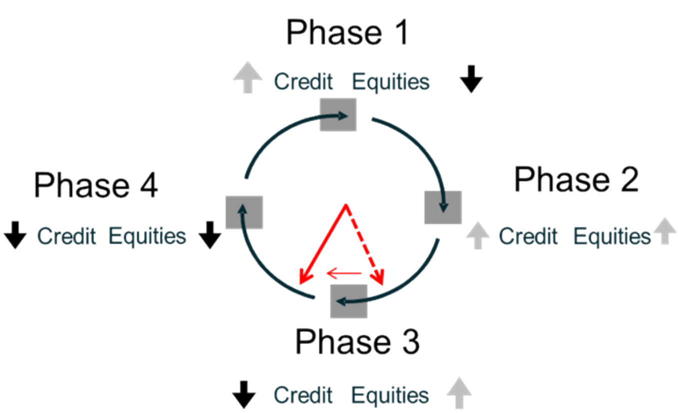
Even a broken clock…

"A man with a watch knows what time it is. A man with two watches isn't so sure."
- Segal's law

Probably the most common question any strategist gets asked is where we are in the investment cycle. Even those who don't like our debt-equity clock seem to have a triangle or a wave or some equivalent alternative: the notion of the economic cycle, and how markets respond to it, is simply the foundation of how most people think about investing.

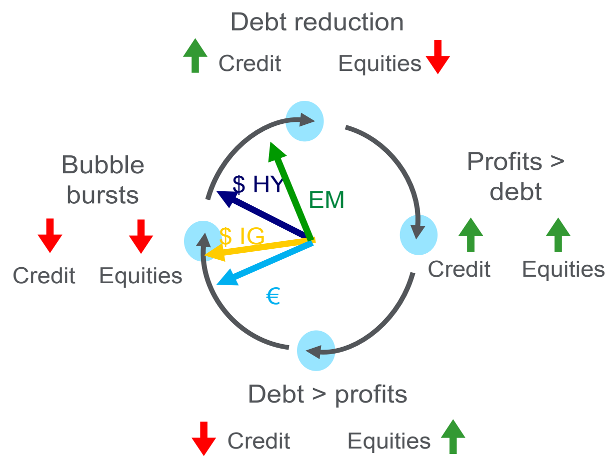
But recent months have revealed a problem – even for strategists purportedly using the same framework. While Rob and the equity strategists would put the hands on the clock earlier in "Phase 3" – say 7 o'clock (Figure 1) – Matt and the credit strategists argue markets are closer to Phase 4, or 9 o'clock (Figure 2) – if indeed they recommend using the clock these days at all.

Figure 1. The clock according to Rob



Source: Citi Research. See *Narrowing Bull Market*, R. Buckland, 4 Jul.

Figure 2. The clock according to Matt



Source: Citi Research. See *How to party when it's not 1999*, M. King, 6 Feb.

Our debate mirrors parallel discussions on the shape of the US yield curve. Many economists are dismissive of its current flatness, arguing that it has been distorted by QE, and that rising inflation should soon lead to higher yields and steeper curves.[1] But others, including the San Francisco Fed,[2] our rates strategists and our credit strategists, argue that its steady flattening poses a genuine and immediate problem for risk assets.[3]

Settling these questions is of critical importance. This is especially true for equity investors, who face the dangerous challenge of riding a late-cycle bull market but avoiding the end-cycle carnage when it breaks. Credit investors lose out in both stages, but somehow they seem resigned to that.

While we always receive a steady stream of such questions, recent weeks have seen the trickle turn into a torrent – perhaps fuelled both by the yield curve and this year's fading returns in most assets outside the S&P. These enquiries are coming not only from traditional asset managers but also from corporates, private equity,

[1] See "Sustaining Full Employment and Inflation around Target", L. Brainard, 31 May.

[2] "Information in the Yield Curve about Future Recessions", Bauer & Mertens, *FRBSF Economic Letter*, 27 Aug. For a useful summary of which governors stand where, see "Fed Officials Debate Signal From Flattening Yield Curve: Is This Time Different?", *WSJ*, 8 July.

[3] *What flattening means for credit*, H. Lorenzen, 20 Jul.

infrastructure and other "alternatives" investors – counterparties whom we do not speak to regularly, and who may well change their positions only once or twice a cycle.

This note is designed at least to air our differences, if not necessarily to resolve them. First, we lay out how the cycle has worked traditionally, and explain why markets seem to follow a global cycle even in the face of regional and sectoral differences in growth and in earnings. Second, we examine the many ways in which this cycle has bucked the traditional pattern. Finally, we look for guidance in history as to what really triggers the transition to Phase 4, and hence what happens next. Unfortunately it is hard to provide definitive answers: we argue that much depends on whether you think the cycle is driven by fundamentals or by market movements, and on whether this cycle's distortions have merely slowed down the clock's alarm function, or broken it entirely.

How the cycle works

Our thoughts on how the cycle is *supposed* to work haven't really changed over the decades. Companies go through regular phases of leveraging and deleveraging, and you can normally tell where you are in the cycle both from what they're doing with their balance sheets and from the response in credit and equity markets. Here's how we put it back in 2005:

Starting at 12 o'clock, in the depths of recessions companies go through intense periods of restructuring in order to reduce their debt burdens. Assets are spun off, dividends skipped and equity raised in order to generate cash and reduce the risk of bankruptcy by paying down debt. Once this activity gets underway, credit spreads rally sharply — the risk of default is perceived to be past its peak — even though equity markets remain in the doldrums because issuance is dilutive and earnings continue to fall.

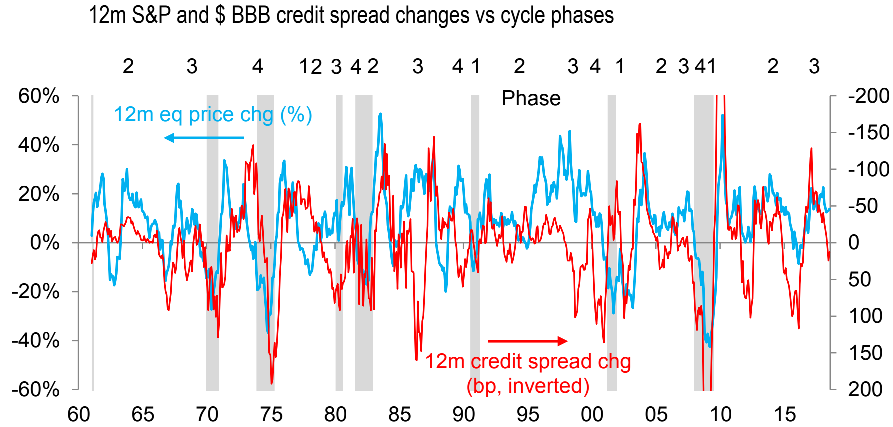
Eventually, cost cutting and aggressive restructuring, accompanied by economic recovery, yields a rebound in profits (after 3 o'clock). In this next phase, both earnings growth and debt/EBITDA are improving, causing credit and equity to rally together. However, as the cycle matures, this progressively gives way to a period of lower quality earnings growth, in which share gains are often achieved at the expense of corporate leverage, for example through acquisitions or share buybacks (after 6 o'clock). This keeps equities rallying, but deteriorating balance sheets start to drive credit spreads higher.

Finally, the resultant balance sheet deterioration comes to a head, creating a crisis in which profits cannot be sustained, and both equities and credit sell off (after 9 o'clock). It's time to take all risk trades off. This is usually associated with a recession which induces the retrenchment which eventually allows the cycle to start all over again.[4]

By and large, we think this framework has held up pretty well, and it is not too difficult to discern its workings in the US over multiple decades. Equities and credit are sometimes positively correlated (Phase 2 and 4) but they can also be negatively correlated (Phase 1 and 3). This is visible in terms of the alternation between credit and equity market returns (Figure 3), and in terms of the cyclical leveraging and deleveraging of nonfinancial corporates' balance sheets (Figure 4).

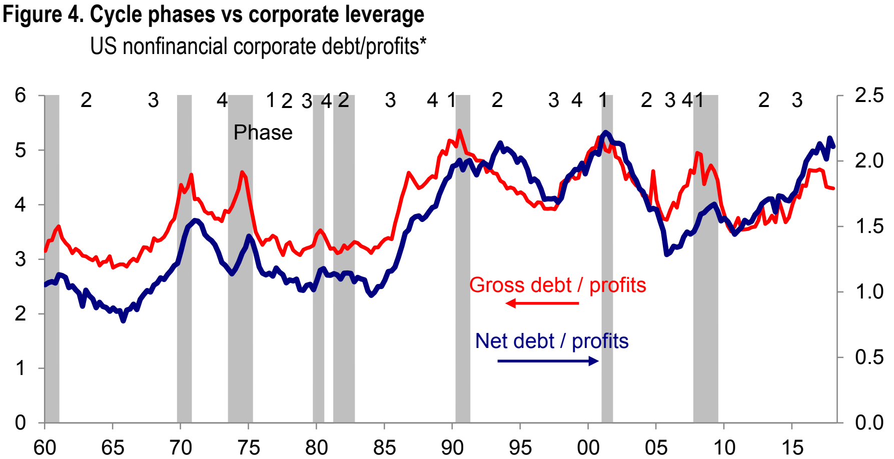
[4] *Predicting corporate leverage*, M. King & R. Fumagalli, Sep 2005.

Figure 3. A four-stroke engine at work



Source: Citi Research, Moody's, FTSE, Haver Analytics. Bars indicate recessions. Spreads are on long-maturity BBB bonds over Treasuries.

Figure 4. Cycle phases vs corporate leverage



Source: Federal Reserve, Citi Research. Profits series are "gross saving less net capital transfers paid", previously known as "internal revenue + inventory valuation adjustment", from the Flow of Funds accounts, and refer to both listed and private nonfinancial corporates.

To be sure, not every cycle is driven by corporates, and the credit and equity market movements are not quite as regular as, well, clockwork. In the 1970s, movements in oil prices were larger drivers of the economy than corporate leverage per se, and emerging from the 1982-3 recession in particular, we cannot see a "Phase 1" in which credit rallied before equities.

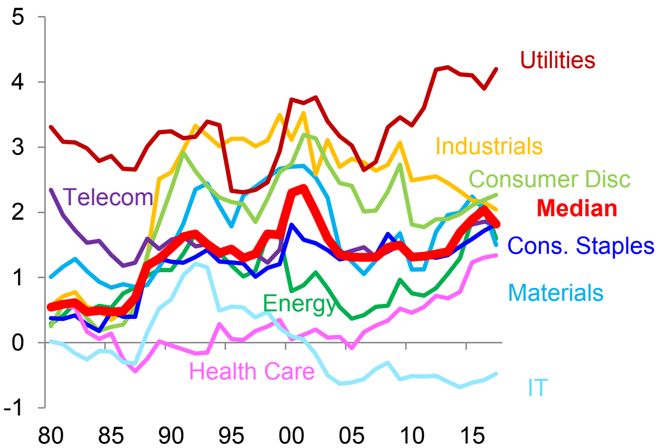
But even when recessions were not actually caused by the non-financial corporate sector – as in 2008 – the broad patterns have still seemed to hold. The recession was preceded by a long period of leveraging up, in corporates as well as in households, and credit market returns turned south months (if not years) before equity market returns did. Understanding the workings of the cycle *is* a useful way to think about how you should invest.

Time waits for no man (but seemingly for a few corporates)

Note that we have never claimed that it has to be the same "time" for different regions, or even for different sectors. Indeed, while similar principles hold at the individual company level, with credit and equity prices responding to changes in balance sheets, different companies can employ very different strategies. For example, while US-based Apple is reducing its cash pile with the primary intention of rewarding shareholders, China's Anbang – after a previous spree of debt-fuelled acquisitions – is now making bond-friendly disposals and trying to shore up its balance sheet.

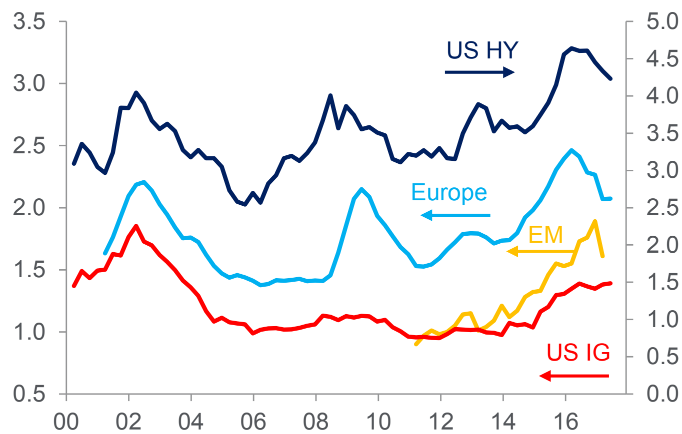
Aggregating leverage statistics across companies and sectors is as much an art as a science; we often joke that you can demonstrate that aggregate leverage is doing almost anything if only you try hard enough. To what extent when calculating net debt/EBITDA should the tech sector cash pile be allowed to offset the debt burdens shouldered elsewhere?[5] Should you calculate median (net debt/EBITDA), median (net debt)/median(EBITDA), or use means[6]? How as an investor in public equities should you treat the hundreds of billions in debt from private-equity-owned names?[7]

Figure 5. Average net debt/EBITDA ratios by global equity sector



Source: Citi Research, Worldscope. Excludes financials.

Figure 6. Average net debt/EBITDA ratios by credit market



Source: Citi Research

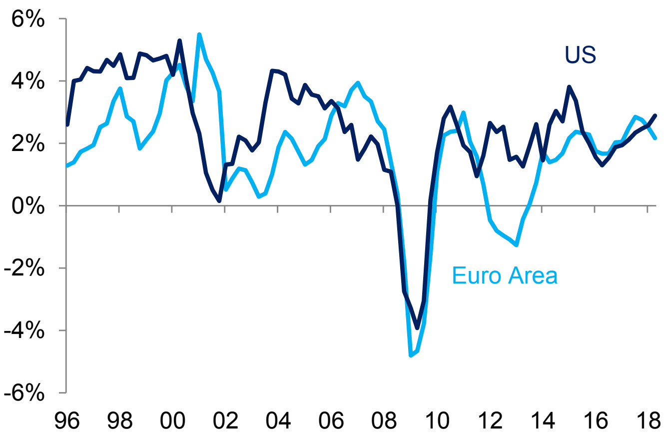
Nevertheless, even given substantial variation at the company and sector level, it is possible to calculate overall averages (Figure 5). It is almost remarkable how similar are the patterns those averages follow across regions and different data sources (Figure 6). From the noise of individual companies' balance sheet decisions, there emerges a global cycle.

[5] Our main instinct is that it shouldn't as it won't reduce the likelihood of heavily indebted companies defaulting – except, of course, to the extent that that cash pile was then invested in other companies' bonds.

[6] Thereby implicitly allowing one company's cash pile or earnings to offset another's debt.

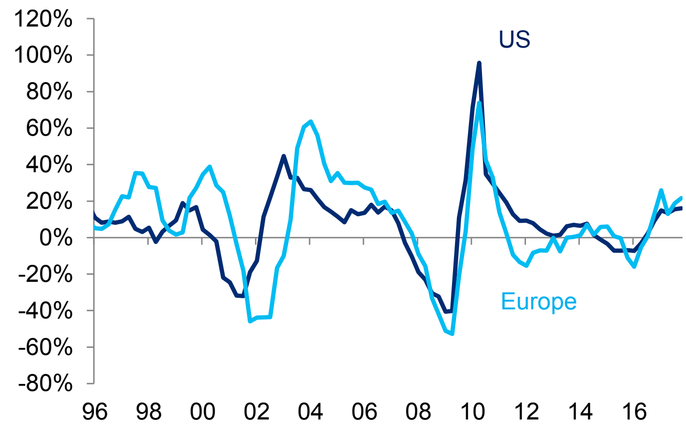
[7] For more on some of these issues, see *Have we passed peak leverage in Europe & the US?*, H. Lorenzen, May 17 and *How vulnerable are European corporates to a downturn?*, Jun 18.

Figure 7. GDP is generally less correlated…
GDP growth by region, YoY %



Source: Citi Research, Haver

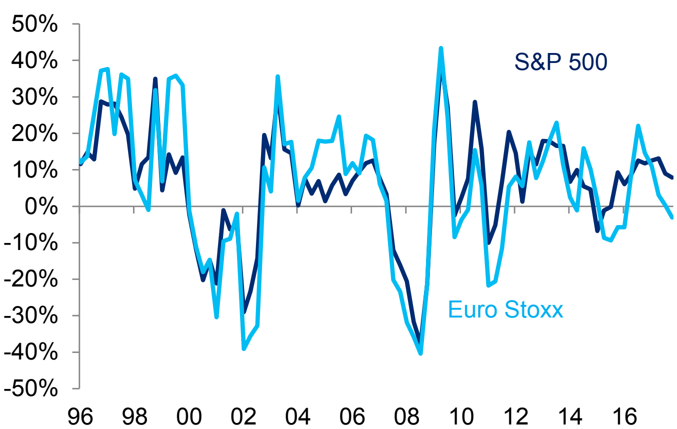
Figure 8. …than large-cap corporate earnings
Earnings growth by region, %



Source: Citi Research, MSCI

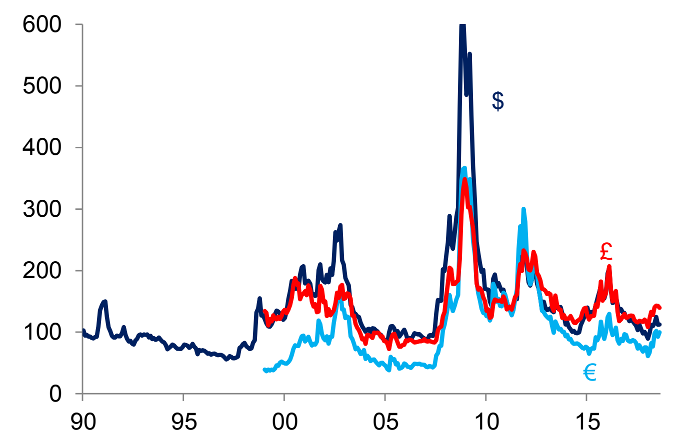
We can see different levels of global correlation when we look at other important variables. While GDP growth is imperfectly correlated, with the US generally considered to be ahead of other countries, EPS growth by region is more closely related, especially recently. And, despite being more volatile, actual stock price returns (Figure 9) or credit spread changes (Figure 10) are all but indistinguishable across regions. Markets are highly correlated, even if fundamentals aren't.

Figure 9. Equity returns by region, 12m rolling, %



Source: Citi Research, Datastream

Figure 10. Credit spreads by currency*



Source: Citi Research, FTSE.
*Credit markets are divided by currency of bond, not by domicile of issuer – but even if issuers from a single region are considered in isolation, the global pattern is still very visible.

A number of factors probably help explain this – some obvious, others less so. For example, credit and equity market indices are dominated by large multi-national companies which generate revenues all over the world. Alternatively, GDP is a more localized measure which reflects the impact of domestic fiscal policy and household spending trends.

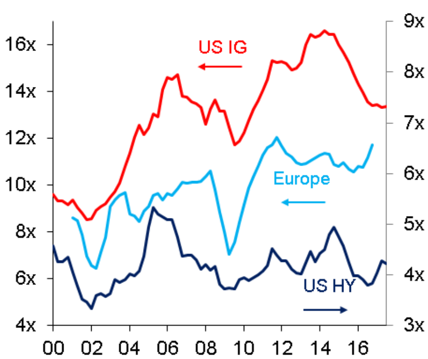
Beyond this, it seems to us that there is a strong element of reflexivity to the process. Company balance sheet decisions, and investor calls on what to buy and sell in credit and equities, are not taken in a vacuum: they influence one another. When Vodafone bought Mannesmann in 1999 in what was then the largest ever M&A deal, its stock continued to rally. This increased the likelihood that AOL would end up buying Time Warner. When Enron filed for bankruptcy in 2001, the environment of increased investor nervousness added to the risk that WorldCom would subsequently do so in 2002. Market movements – and investors' and corporates' responses to them – are themselves significant drivers of the cycle.

But how have markets been moving this time round, and what does that tell us about the all-important transition to Phase 4?

Who stopped the clock?

In fundamental terms, this cycle things seem to have proceeded pretty much as usual. A period in which profits were growing faster than debt, from 2009 to 2012, has been followed by one in which debt has been growing faster than profits. As a result, overall corporate leverage has risen well beyond that reached in 2008, to the highest level ever recorded outside of an actual recession (Figure 4, Figure 5, Figure 6). Presumably one reason this has been possible is that record-low levels of interest rates have made interest payments look manageable, even with record-high levels of debt (Figure 11).

Figure 11. Interest coverage by region

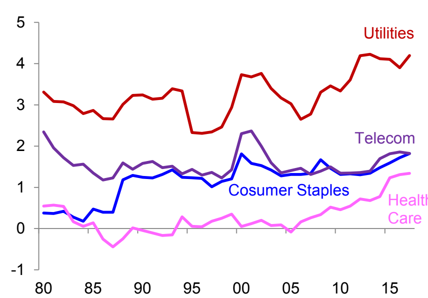


Source: Citi Research, Bloomberg.

When broken down by sector, the pattern is more varied, but probably no more so than normal.

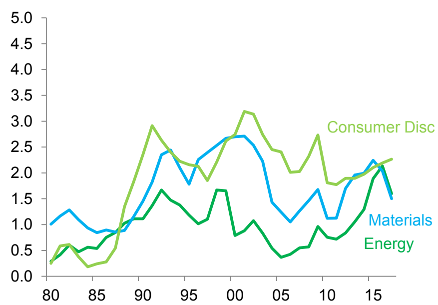
The sectors seemingly most intent on leveraging up are those which it might be reasonably argued ought to be most able to bear it: Utilities, Healthcare, Consumer Staples and Telecoms. That said, in many cases they are now running with substantially more leverage than ever previously (Figure 12).

Figure 12. Global leverage: non-cyclicals



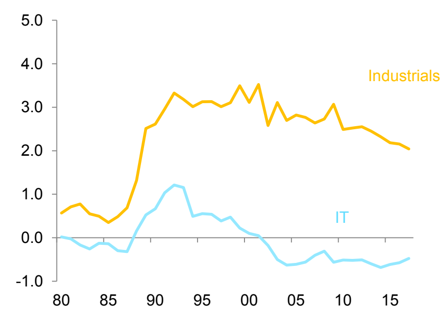
Source: Citi Research, Worldscope.

Figure 13. Global leverage: cyclicals



Source: Citi Research, Worldscope

Figure 14. Global leverage: industrials & IT



Source: Citi Research, Worldscope

A second group of sectors – traditional cyclicals – have likewise spent most of the past few years leveraging up. But they are not running with significantly more debt than in previous cycles (Figure 13). Energy and Materials seem almost to have come out the other side, and are now engaged in deleveraging following a leverage peak in 2015 (eg Glencore making disposals and Anglo American buying back bonds). These are also the sectors which have led to the recent deleveraging visible in the overall statistics for US HY and Emerging Markets (Figure 6).

Finally, Industrials and IT have bucked the broader trend entirely, and have largely been reducing indebtedness since the early 1990s (Figure 14).

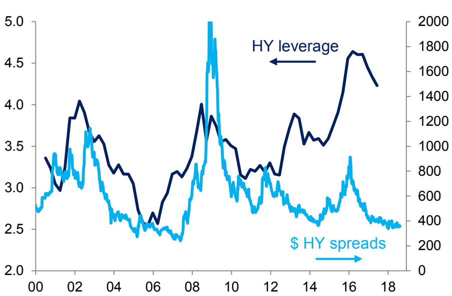
Putting these numbers together, Matt thinks aggregate leverage is higher than might be expected outside of a recession, and hence more reminiscent of late Phase 3 than early Phase 3[8]. But low interest rates and the predominance of increased leverage amongst the more defensive sectors help explain why this has not yet been seen as a problem for markets as a whole. Moreover, there are even signs that aggregate leverage is beginning to decline given recent strong profit growth and helpful US tax cuts.

But Rob's primary reason for thinking this is Phase 3 is not based on fundamentals but more on market movements – in particular, the current outperformance of equities relative to credit is classic Phase 3. Other Phase 3 characteristics, such as narrowing market leadership[9], are also evident (Global Equity Quarterly: Narrowing Bull Market).

A central banker in the works

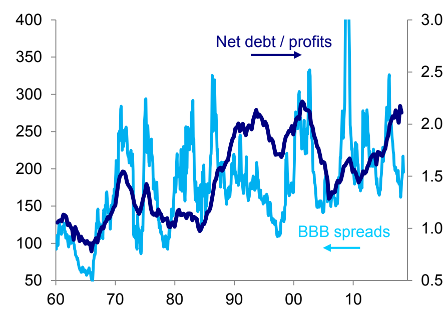
Most importantly, the steady leveraging-up by companies since 2012 has simply not been accompanied by spread widening on anything like the same scale as in previous cycles. Indeed, even with non-financial corporate leverage higher than the levels seen in 2008 and (on some universes) 2001-2, credit spreads are not far off traditional cyclical tights, especially in US HY (Figure 15). The pattern in € HY and $ and € investment-grade is similar, if slightly less extreme. Even long-term charts – over which period it becomes difficult to difficult to obtain consistent universes for both spreads and leverage – suggest that something is awry (Figure 16).

Figure 15. Since 2012, something has broken…
$ HY net debt/EBITDA vs spreads (bp)



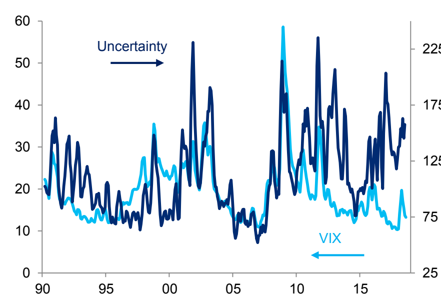
Source: Citi Research, FTSE.

Figure 16. …also for the economy as a whole…
Flow of funds lev vs Baa spreads* (bp)



Source: Citi Research, FTSE, Moody's, Federal Reserve. *Time series assembled from multiple sources.

Figure 17. …and also for market volatility
US news-based uncertainty vs VIX



Source: Citi Research, CBOE, policyuncertainty.com

If it were just credit spreads which were behaving in this fashion, the signal could perhaps be ignored, or dismissed as an excessive focus on headline debt levels rather than interest coverage and debt sustainability. Indeed, the rating agencies invoke just such an argument when asked why such high debt levels have not led to an increase in downgrades.

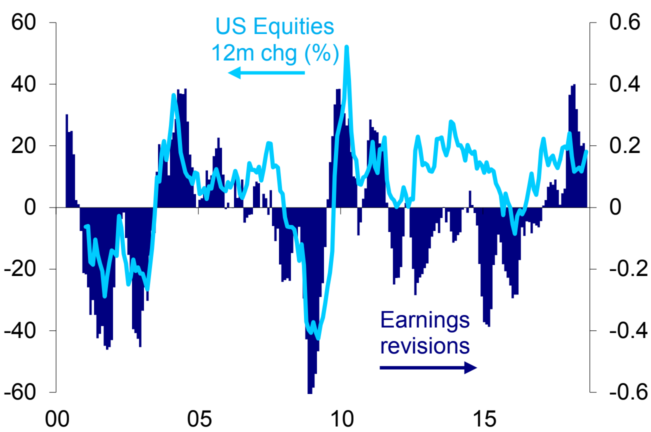
But the same time period – since 2012 – which has seen leverage rising and spreads tightening also reflects a breakdown in other market relationships. Equity volatility traditionally correlates with metrics designed to capture policy uncertainty (the number of references to uncertainty in the news, for example). But since 2012 uncertainty has been high, and yet volatility across markets has been setting new record lows (Figure 17). Changes in consensus earnings expectations used to correlate with equity market moves in every region, yet since 2012 that relationship

[8] To put it generously – Matt.

[9] Value investors must grit teeth and admit mistake on US stocks, R. Buckland, FT, 14 Aug.

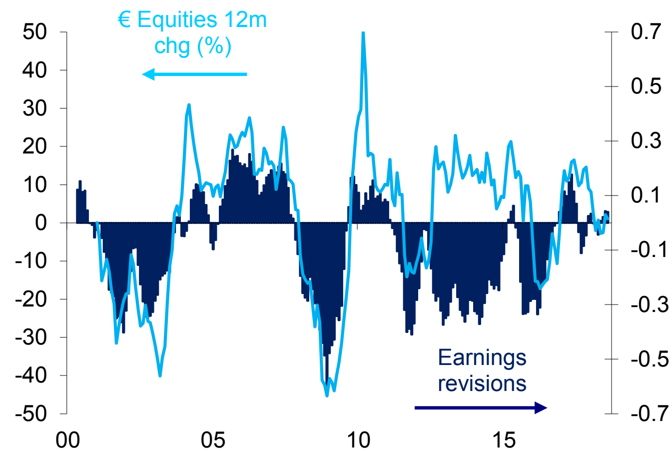
has broken down too, even if it is now beginning to re-establish itself (Figure 18, Figure 19).

Figure 18. 2012 also shows a breakdown for earnings revisions…
US earnings revisions index vs S&P 12m chg (%)



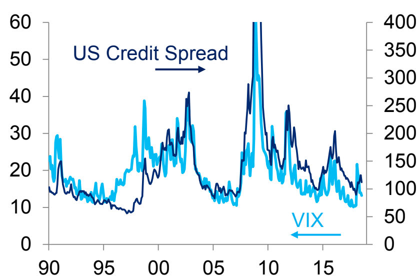
Source: Citi Research, Factset

Figure 19. …even if the relationship is now re-correlating
Europe earnings revisions index vs Stoxx 12m chg (%)



Source: Citi Research, Factset

Figure 20. US IG Credit Spreads (bp) & VIX



Source: Citi Research, FTSE, CBOE

Matt has argued loudly for several years that all these breakdowns are due to QE, and "too much money chasing too few assets". He thinks that as central banks pull back, both credit and equities are vulnerable, and cites in his support continuing strong correlations between global central bank purchases and market movements.[10] As was visible in February this year, the central banks have effectively "broken" the normal clock functioning, and credit can no longer be relied upon to lead equities in the way it has done historically.

Rob sees it slightly differently. QE intentionally decoupled credit spreads (kept falling) from corporate leverage (kept rising). Even as balance sheets moved through 6 o'clock, so central bankers kept risk asset pricing back at 5 o'clock. The reason that equity volatility fell is that it is highly correlated to credit spreads (Figure 20), and QE kept spreads falling. But now that has changed. As central banks step back, so the credit and equity markets will catch up with fundamentals. This year's rise in spreads and volatility finally marks the move into Phase 3 that, without QE, would have started in 2012. Rob thinks that QE has held the clock back, not broken it.

Time is an illusion. Lunchtime doubly so.[11]

Unfortunately a closer examination of both market and fundamental data in this cycle does relatively little to shed light on this debate, or at a minimum can be construed as arguing in both directions.

One potential end-cycle sign is compression of corporate margins, at least as proxied by companies' unit labour costs (usually the major driver of their cost base) relative to output prices (tracked by the broad GDP deflator). In the US in 1979, 1989,1999 and 2007, labour costs rose more rapidly than output prices as the cycle matured, labour gained in pricing power and corporate profit margins were

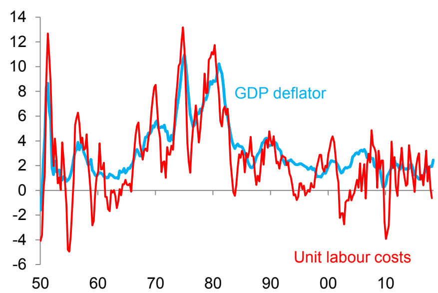
[10] See *Central Bank Liquidity Report*, C. Chapman, monthly.

[11] *The Hitchhiker's Guide to the Galaxy*, D. Adams. The idea is that it sounds deep, but doesn't really mean very much – perhaps like some analysis of market cycles.

squeezed (Figure 22). Something similar happened for the Euro area in 1999, 2007-8 and in 2012 (Figure 23). Each time, this was a useful warning that companies were resorting to leverage in order to support earnings growth, and of the consequent vulnerability of the equity market.

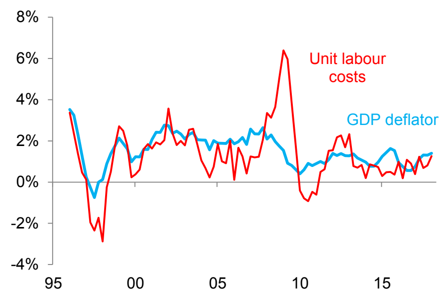
Rob agrees that you may get a rolling over in "per unit" margins in the macro data, even as overall profit margins of listed corporates keep rising. But a combination of strong volumes and high margins are enough to keep profits rising and the bull market rattling along (Figure 23). Overall profit margins don't collapse until the recession begins, volumes fall and companies are left with excess fixed cost bases. As such profit margins are a coincident indicator with the stock market, which is why Matt doesn't like them. They don't give any prior warning; they always look great right up to the last minute.

Figure 21. US Corporate Margin Proxy



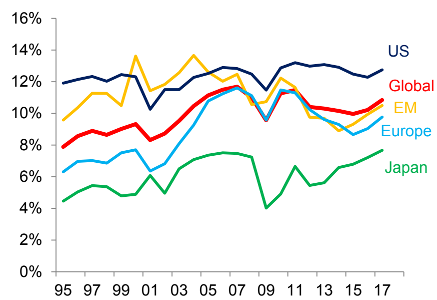
Source: Citi Research, BEA

Figure 22. Euro Area Corporate Margin Proxy



Source: Citi Research, Eurostat

Figure 23. Ex-Financial Listed Corp. EBIT Margin



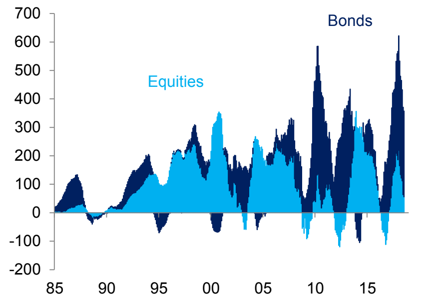
Source: Citi Research, Worldscope, Factset

The trouble is, this time round, while there is some evidence of margin compression in the Euro area, US unit labour costs have been oscillating without any clear trend. However you look at it, the sort of earnings growth and especially revenue growth we have seen in 2017-18 simply defies traditional models for what is "supposed" to happen at this stage of the cycle.

Yet another potentially useful late-cycle indicator is mutual fund flows. You might reasonably have expected Phase 3 to be associated with strong flows into equities. A strong rotation from bonds into equities is very visible in 1997-2000, and is notable by its absence this time round, perhaps suggesting Phase 3 has much further to run (Figure 24).[12]

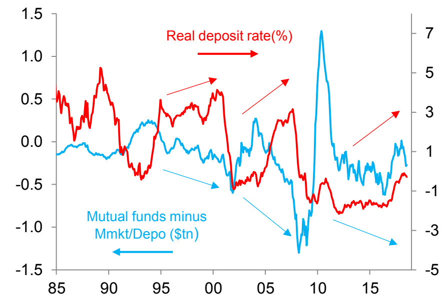
[12] It was this which led Matt to argue earlier this year that "the revellers' reluctance is both threat and opportunity" – see *How to party when it's not 1999*, M. King, 6 Feb.

Figure 24. So much for the Great Rotation
Mutual fund+ETF inflow, rolling 12m $bn



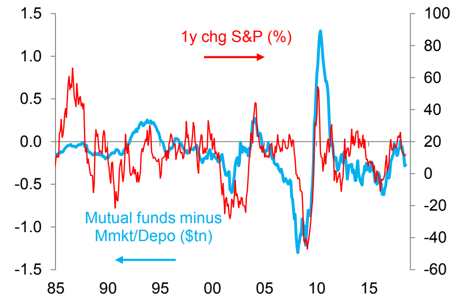
Source: ICI, Citi Research.

Figure 25. Deposit rates up, fund flows down
Combined mutual fund flow, 12m



Source: ICI, Federal Reserve, Citi Research.

Figure 26. But which drives which?
Combined mutual fund flow vs S&P



Source: ICI, Federal Reserve, Citi Research.

But both 1985-87 and 2005-2007 were associated with exuberance in fund flows in general – an exuberance which now seems to be running out of steam. Another way to think of fund flows is in terms of total inflows to all risky assets (bonds, equities and hybrid funds combined) relative to inflows to money market funds and deposits. This seems to follow a regular cycle with respect to deposit rates (Figure 25). In Phases 1 & 2, emerging from recession, when deposit rates are low, and valuations are cheap, investors do most of their saving in risk assets. As the cycle matures and as deposit rates rise, they steadily move some of their savings in deposits. Eventually in Phase 4, they sell all risk assets, prices fall, deposit rates are cut and the, eventually, the cycle starts again. This year's tremors in markets may be a sign that just such a phase is being reached already.

Yet here too, the signals are ambiguous. Fund flows both influence market returns and are influenced by them (Figure 26). While we find it quite easy to imagine a scenario in which fund outflows drive markets lower and trigger a growth slowdown, it is by no means a foregone conclusion. We seemed to be embarking on just such a negative path in February 2016, but then an unusual (from the perspective of these charts) rally in markets – admittedly following more central bank intervention – halted the outflows and triggered two years of further inflows. While central bank easing now feels much less likely, positive market returns in equities, driven by earnings growth and share buybacks, may well suffice to spark inflows of their own accord.

If Matt is right, further central bank withdrawal should mean the inflows fizzle out and turn to outflows, conclusively creating a bear market not just for credit but also for equities. If Rob is right, central bank withdrawal and renewed corporate releveraging should cause credit spreads to widen, but equities may yet have further to rally. They become the only game in town. But equally, it would not be that surprising – especially given the example of the Energy and Materials sectors, and the broad-based deleveraging thanks to earnings growth – for us to skip Phases 4 and 1 entirely, and go straight back to the "organic" deleveraging associated with Phase 2, in which both credit and equities rally. This is, in effect, what markets did during 2017. But was that fundamentals, or the effect of extraordinary central bank policies? Once again, this cycle defies easy categorization.

What really causes the transition to end-cycle?

The tables below are two last efforts to end the debate – but again probably just end up fomenting it.

Figure 27 shows the approximate levels of both fundamental and market metrics which have accompanied the transition to Phase 4 in each US cycle back to the 1970s, and compares them to levels today.

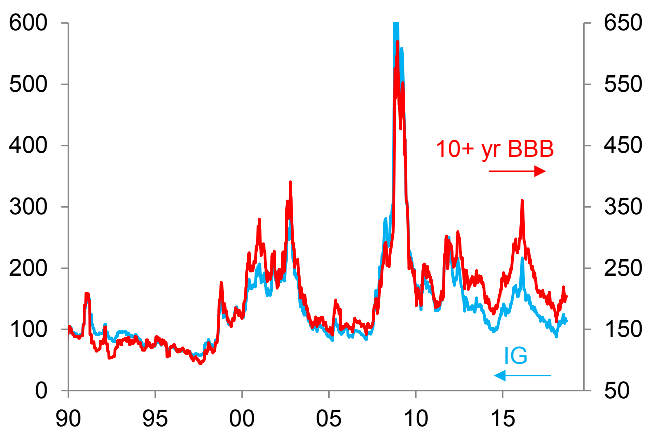
Figure 27. US Fundamental And Market Metrics At The Start Of Phase 4

		Net Debt / Profits	Gross Debt / Profits	Credit Spread (bp)	EPS Growth	GDP Growth	US Equity PE	Phase 3 Duration (months)
31/01/1973	Jan'73	1.30	3.74	112	7.3%	6.9%	19	47
31/12/1980	Dec'80	1.13	3.32	185	0.1%	7.7%	9	26
31/12/1989	Dec'89	1.88	5.17	220	4.4%	0.8%	14	16
31/03/2000	Mar'00	1.98	4.95	241	14.9%	1.5%	31	32
31/10/2007	Oct'07	1.44	4.63	181	14.8%	2.2%	18	4
	Average	**1.55**	**4.36**	**188**	**8.3%**	**3.8%**	**18**	**25**
	Median	**1.44**	**4.63**	**185**	**7.3%**	**2.2%**	**18**	**26**
31/08/2018	Now	2.11	4.30	199	18.8%	4.2%	23	?

Source: Federal Reserve, BEA, FTSE, Moody's, MSCI, Citi Research. Leverage figures from Flow of Funds. Credit spreads uses combined series for 10+ year BBBs.

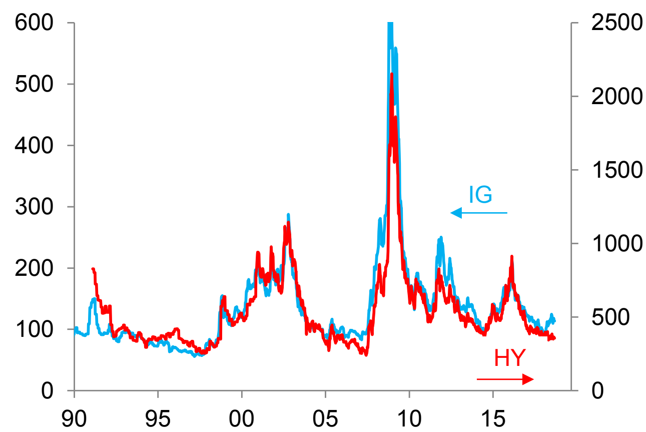
While there is no magic level associated with the transition to a bear market – indeed, the variability is perhaps the most striking feature of the table – it would seem mostly to give ammunition to Matt. As we established earlier, corporate leverage is already at levels traditionally associated with Phase 4. On this particular timeseries for 10+ year BBB credit spreads, the only one for which we have such a long history, spreads are already at Phase 4 levels. Note, though, that some of this is because the credit spread maturity curve has steepened over time: spreads for credit in general are much closer to cyclical tights (Figure 28).[13] US EPS and GDP growth are very strong – but have typically been strong or very strong right up until Phase 4 in prior cycles. And US P/Es are more elevated than in any Phase 4 transition with the exception of March 2000. Finally, on timing, the average Phase 3 lasts just over two years. Matt would say that, on fundamentals, this Phase 3 started in 2012, so Phase 4 is well overdue. Rob would say that, on market action, this Phase 3 started earlier this year, so could last another 18 months.

Figure 28. Long-maturity bonds wider relative to previous cycles (bp)



Source: FTSE, Citi Research. To see these and other associated series directly in the Velocity chart tool, click here.

Figure 29. HY closer to cyclical tights than IG (bp)



Source: FTSE, Citi Research.

Rob doesn't much like that table, and prefers to use broad index data for IG credit spreads, even if it makes for a slightly shorter history. HY spreads help him make his point better still (Figure 29).

[13] Matt suspects this is because of the growth of the mutual fund bid (concentrated on shorter maturities) relative to the traditional pension and insurance bid (concentrated in the long end).

Instead, Rob's preferred comparison is his Bear Market Checklist for equities. It tracks a broader set of metrics, and watches for the same sort of exuberance which has presaged the last two "proper" bear markets. It is showing red on just 2/18 metrics, and amber on another four, making just four sell signals in total (with amber worth ½ point). Credit spreads on the broad IG and HY universes are still some way off the level he considers a sell signal.

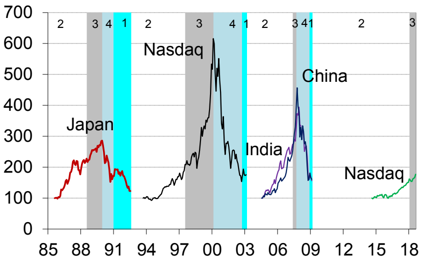
Figure 30. Rob's Bear Market Checklist

	Start Of Proper Bear Markets: Mar-00	Start Of Proper Bear Markets: Oct-07	Now
Global Equity Valuations			
Trailing PE	33	17	19
Fwd PE	24	14	15
DY	1.3	2.1	2.4
CAPE	48	30	25
Global Equity Risk Premium	1.0%	3.3%	3.3%
US Yield Curve (10Y minus 2Y)	-0.5	0.0	0.2
Sentiment			
Global Analyst Bullishness (std dev)	1.7	1.0	1.0
US Panic Euphoria Model	1.09	0.42	0.52
Global Equity Fund Flows (3y as % of Mkt cap)	2.9%	0.7%	0.4%
Corporate Behaviour			
Global Capex Growth (YoY)	8% (1999)	11% (2007)	7% (2018e)
M&A (Previous 6m as % of Mkt cap)	6.1%	4.2%	3.0%
IPOs (Previous 12m as % of DM Mkt cap)	0.70%	0.40%	0.2%
Profitability			
Global RoE	12.2%	16.1%	12.6%
Global EPS ($, % from previous peak)	35%	117%	8%
Balance sheets / credit markets			
Asset/Equity (US Financials)	16x	16x	10x
Net Debt/EBITDA (US ex Fins)	1.8x	1.4x	1.6x
US HY Bond Spread	600bp	600bp	375bp
US IG Bond Spread	175bp	175bp	115bp
# of sell signals	17.5/18	13/18	4/18

Source: Citi Research

The issue Matt has with this is the presumption that you need a proper boom in order to have a bust. As one of Rob's clients put it back in the late 1990s: "it's only a proper bubble when you get fired for not owning it". That may have been true of Japan in 1990, TMT in 2000 and US housing in 2007, but it is debatable whether it must always apply. Booms in capex, M&A and IPOs certainly add to the risk that subsequent excess capacity and excess corporate debt lead to market retrenchment. But corporate investment relative to GDP and profits has been declining for decades – hence all the worry about secular stagnation. Given that, and given a backdrop of concern about *aggregate* debt levels across corporates, households and governments – as opposed to corporate debt specifically – it is hard to feel sure that the cycle needs to end with a bang rather than with a whimper. Matt's preferred reference point here is Wile E. Coyote: it is the act of looking down and losing confidence which leads to his downfall, not the need for the cliff-edge to be especially elevated over the canyon beneath.

Figure 31. Previous Equity Market Bubbles



Source: Citi Research, Datastream. Price indices.

Rob can see that cliff-edge coming, but doesn't think we are there yet. In the meantime, he would recommend adopting a typical Phase 3 equity strategy: keep buying the (increasingly frequent and large) dips. Within equities he would adopt a "bull markets narrow" approach: Overweight the leading market (US), the leading style (growth not value) and the leading index/sector (Nasdaq/IT). This strategy is working pretty well right now, supporting Rob's suspicion that we are in Phase 3. It will be a disaster in Phase 4, but it's too early to make that call (Figure 31).

The clock ticks for thee

One reason this debate is so hard to resolve is because we ourselves, as participants in markets, are a part of it. The cycle is not just something "out there", which markets respond to; they themselves help to determine it.

Moreover, it is only ever possible to identify a bear market with hindsight. There is nothing in the magnitude of the initial sell-off which distinguishes between a bull market correction (when you should buy) and the beginning of a bear market (when you should sell); the difference is that the bull market picks itself up again while the bear market becomes self-fulfilling. Most likely the debate will be continuing even once the bear market eventually turns out already to have started.

The differences between Rob and Matt are not as great as all that. Rob thinks it's early in Phase 3, perhaps around 7 o'clock; Matt seems to think it's 8:59. But then the risk for Matt of being too early is largely one of foregoing a little extra carry in credit; the risk for Rob is of missing out on the considerable gains to be had as his late-cycle bull market narrows. We both have a relative preference for equities over credit (risk-adjusted) – it's just that Matt is much more cautious about overall risk levels than Rob is, especially given the rising rate on US$ cash.

Ultimately, then, the question of who is right will depend on how you, as investors, respond to those rising cash rates, and to the unusual period we've been living through. Only when you call time on the cycle will it really end. We give the last words to John Donne, which seem as apt for the schisms in today's society as they were for a divided England in 1624:

"Perchance he for whom this bell tolls may be so ill, as that he knows not it tolls for him; and perchance I may think myself so much better than I am, as that they who are about me, and see my state, may have caused it to toll for me, and I know not that.

…

No man is an island, entire of itself; every man is a piece of the continent, a part of the main… If a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friend's or of thine own were: any man's death diminishes me, because I am involved in mankind, and therefore never send to know for whom the bell tolls; it tolls for thee."

Appendix A-1

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