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Assessing the Risk of Emerging Market Contagion

As conditions have deteriorated across Turkey, Argentina, South Africa, and now Brazil, the question of contagion naturally rises. Historical episodes like the Asian financial crisis in the late 1990s and the Latin American debt crisis in the early 1980s saw several dominoes fall in a row, both because those countries were exposed to similar drivers (e.g., Fed tightening and declining global liquidity) and also because weakness in one country caused weakness in another through trade and shared investors. Those dynamics are clearly in play today, although the extent and nature of the linkages have changed relative to past cases (in some ways that have made the linkages tighter and in others that have created more independence).

In these *Observations*, we will share our thoughts on the risk of contagion today, in a nutshell:

1) Turkey and Argentina are not material risks in their own right.

2) Overall, emerging markets are less net dependent on foreign capital than in a typical EM crisis and have more policy tools available to them (high reserves, floating exchange rates, and a local credit market).

3) Asset holders are generally less levered, although many have been affected by declining dollar liquidity.

4) While asset holders are less levered, the level of financial linkages with the EM is at secular highs.

5) Outside of Turkey and Argentina, Chile, Indonesia, South Africa and Brazil are the most exposed.

To start, the table below lays out the key drivers of contagion (focusing on financial channels, which are generally the quickest and most impactful) across the emerging world today relative to textbook cases. As you can see, the emerging world in aggregate is far better positioned to withstand a pullback in capital this time around and policy makers have much more flexibility to deal with a pullback, should it occur. Additionally, the pockets of high-risk economies are much smaller today, and only Turkey and Argentina stand out as acute risks. And while the level of financial exposure to the emerging world is higher this time around and could still cause substantial pain, this exposure is spread out among a more diverse and less levered set of creditors, lowering the risk of cascading effects.

Emerging Market Contagion Susceptibility

	LatAm Debt Crisis (1980s)	Asia Financial Crisis (1990s)	Today
Reliance on Capital (%GDP)	**Very Bad**	**Bad**	**Good**
Current Account	-4.9%	-2.0%	0.4%
Capital Inflows	3.0%	4.5%	1.9%
Hard FX Debt	19%	22%	29%
ST Hard FX Debt	7%	9%	9%
Policy Levers	**Bad**	**Very Bad**	**Very Good**
Heavily Managed/Pegged FX (%Total)	62%	73%	23%
Net Reserve Level (%GDP)	6%	10%	18%
Net Reserve Level (% Hard FX Debt)	56%	46%	89%
Net Reserve Level (% ST Hard FX Debt)	153%	112%	307%
Countries at Risk	**Very Bad**	**Bad**	**Very Good**
Number of Economies (%Total)	64%	50%	11%
Level of Exposure	**Good**	**Good**	**Bad**
Financial Liabilities (%World GDP)	2%	2%	10%
Exposure by Player (%Total)	**Very Bad**	**Neutral**	**Good**
Banks	95%	66%	52%
Mutual Funds	1%	11%	30%
Other	4%	23%	18%

The EM is far less reliant on capital and has ample ability to deal with a pullback

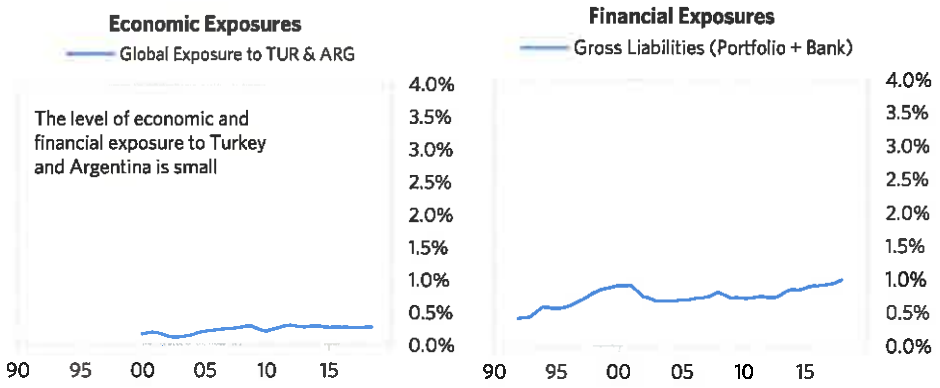
The pockets of exposure are small

And, even though the level of exposure is large, the holdings are more diversified and less levered

Turkey and Argentina Are Not Material Risks in Their Own Right

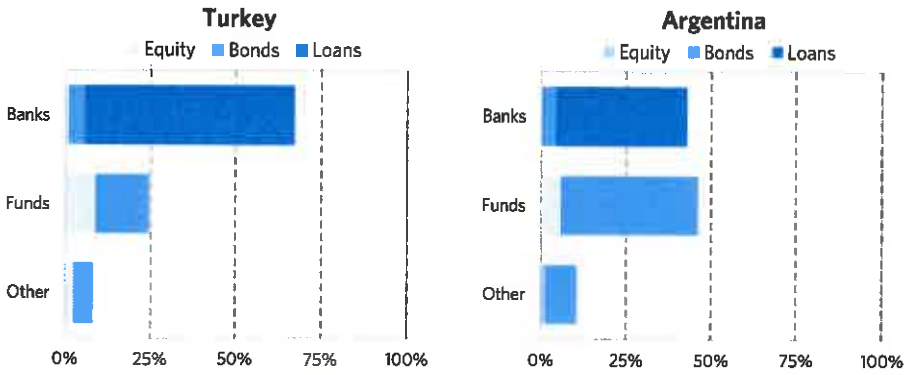
Turkey and Argentina's economic and financial linkages to the rest of the world and the contagion likely to arise from them are small. As discussed above, the biggest risks are generally through financial channels, which, in the cases of Turkey and Argentina, are a bit larger than their economic linkages (after years of running current account deficits), but are similarly small.

Exposures to Turkey and Argentina (% World GDP)

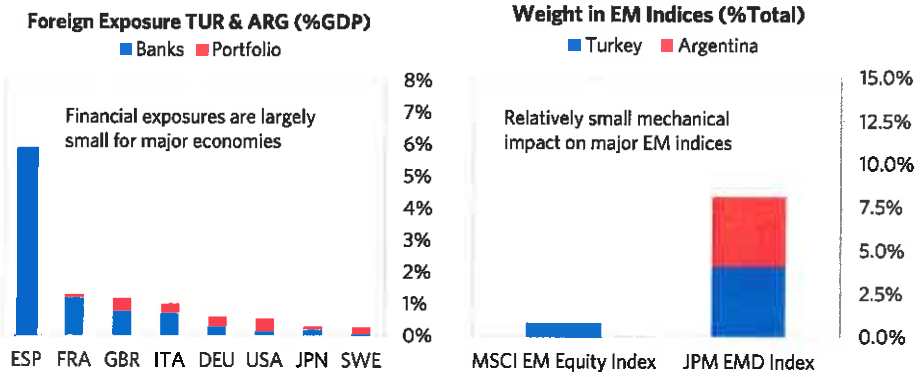


That being said, even small exposures can lead to contagion if losses are concentrated within a small set of levered creditors (such as the case in the Latin American and Asian financial crises) who are forced to liquidate their books to cover losses. This is not the case in Turkey and Argentina. Financial exposures to those countries are relatively diversified across a broad range of players and generally held by well-capitalized entities. Additionally, the overlap between creditors to Turkey and creditors to Argentina is limited, reducing the chances of contagion.

Financial Exposures to Turkey and Argentina by Player (%Total)



The largest exposures are concentrated in the hands of a few European banking systems, particularly Spain. These exposures are large enough to cause some pain, but we don't see the exposures as large enough relative to the capital in those banking systems to pose a systemic problem. The potential for a ripple effect is also mitigated because the lending is mostly through ownership stakes in separately capitalized subsidiaries, which caps the potential downside to the size of the ownership stake. Portfolio investment exposures are relatively diversified at the country level. Additionally, while it's difficult to know how investors will react to the extremely weak performance of Turkish and Argentinian assets, the sell-off is mechanically having a relatively small impact because of those assets' limited contributions to major indices held by international investors.



Outside of Turkey and Argentina, There Are Countries to Be Concerned About, but Nothing Like Prior Crises

One primary way that contagion occurs is when countries are unable to withstand global withdrawals of cross-border capital investment. A classic example of this dynamic is how the Asian financial crisis in the late 1990s played out following the devaluation and ensuing crisis in Thailand. At that time, the number of countries exposed to dollar pullback was far higher, and imbalances were relatively widespread: financing needs were large, countries could only fund through hard currency debt (much of which was short-term), while low levels of reserves and currency pegs gave them little policy flexibility to manage through periods of stress. The table below illustrates this point by showing EM countries across a set of metrics that serve as a good guide to gauging their sensitivity and ability to deal with a pullback in foreign liquidity at the time.

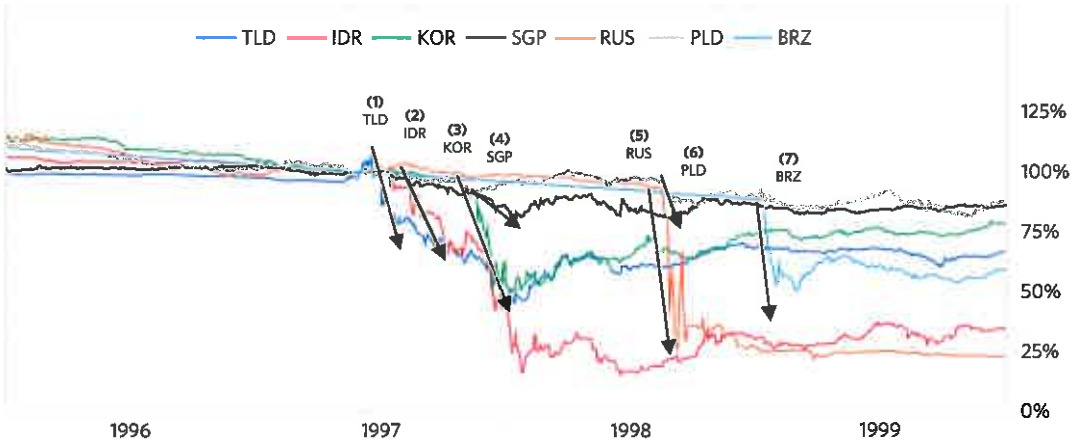
Asian Financial Crisis (Late 1990s)

	Reliance on Foreign Capital				Ability to Manage			
Country	Current Account (%GDP)	Financial Inflows (%GDP)	Hard FX Ext Debt (%GDP)	ST Ext Debt (%Total Ext)	FX Peggged or Heavily Managed	Net Reserves (%GDP)	Ext Debt in Local FX (%Total)	Aggregate Susceptibility
Thailand	-8%	16%	54%	26%	Yes	20%	8%	Very High
Philippines	-2%	7%	22%	7%	Yes	4%	2%	Very High
Argentina	-2%	4%	29%	13%	Yes	7%	2%	High
South Korea	-2%	7%	19%	9%	No	10%	0%	High
Peru	-9%	3%	25%	10%	No	19%	0%	High
Indonesia	-3%	3%	30%	13%	Yes	8%	15%	High
Chile	-2%	1%	30%	10%	Yes	26%	1%	High
Mexico	0%	-3%	31%	9%	No	0%	1%	High
Brazil	-2%	4%	19%	7%	No	8%	0%	High
Turkey	-1%	2%	24%	8%	Yes	3%	0%	Med
Malaysia	-9%	3%	25%	12%	Yes	34%	15%	Med
Czech Republic	-2%	13%	23%	9%	Yes	21%	--	Med
South Africa	-2%	5%	13%	--	Yes	-16%	30%	Med
Hungary	-3%	1%	47%	12%	No	20%	19%	Med
Russia	2%	4%	10%	4%	Yes	4%	9%	Med
India	-2%	1%	12%	5%	No	7%	13%	Med/Low
Poland	0%	1%	7%	3%	No	10%	--	Low
Taiwan	2%	1%	9%	7%	No	42%	--	Low

Most EMs highly susceptible to a pullback

The currency market action in this case gives you a sense of the timeline of what transpired across the emerging world in the period following Thailand's collapse. Those countries that were highly dependent on foreign capital, with little ability to manage such a pullback, were hit first (i.e., Indonesia and Korea); then the crisis progressively spread to other vulnerable economies (e.g., Poland, Russia, and Brazil). In this case, even Singapore, running a current account surplus at the time, was dragged down given its high linkages to the rest of the region.

Spot FX vs Relevant FX (Indexed to June 1997)



Similarly, the dependence on foreign—in particular, dollar—capital across the emerging world was very high across many countries in the case of Latin America in the 1980s.

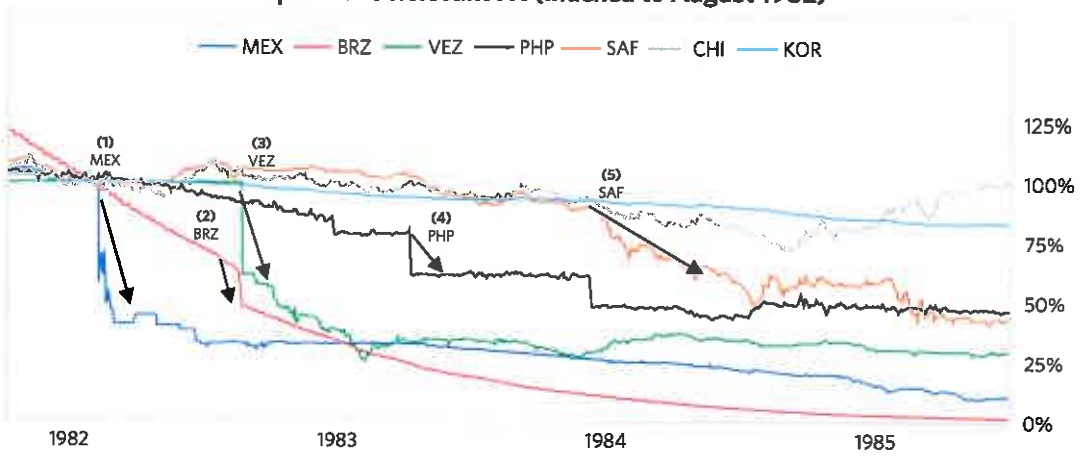
Latin American Debt Crisis (Early 1980s)

	Reliance on Foreign Capital				Ability to Manage			
Country	Current Account (%GDP)	Financial Inflows (%GDP)	Hard FX Ext Debt (%GDP)	External Debt Due In 1 Year (%Total External)	FX Pegged or Heavily Managed	Net Reserves (%GDP)	External Debt in Local FX (%Total)	Aggregate Susceptibility
Mexico	-5%	5%	20%	5%	Yes	2%	1%	Very High
Brazil	-6%	4%	23%	7%	No	3%	0%	Very High
South Korea	-7%	10%	38%	19%	No	5%	0%	Very High
Philippines	-5%	9%	38%	18%	No	8%	2%	Very High
Chile	-8%	11%	34%	11%	Yes	17%	1%	Very High
Thailand	-7%	6%	17%	8%	Yes	4%	8%	Very High
Turkey	--	--	8%	3%	Yes	5%	0%	Very High
Peru	-1%	--	31%	16%	Yes	15%	--	High
Argentina	-3%	1%	12%	11%	Yes	15%	2%	High
Hungary	--	--	37%	20%	No	--	19%	Med
India	-1%	1%	3%	2%	No	8%	13%	Med/Low
Malaysia	-2%	3%	10%	1%	No	23%	15%	Low
Indonesia	3%	--	10%	3%	Yes	9%	15%	Low
South Africa	3%	0%	12%	--	No	7%	30%	Low

Most EMs highly susceptible to a pullback

Consistent with heightened contagion risk at the time, the Latin American debt crisis played out similarly to what we saw in the Asian financial crisis: starting with a few particularly stressed countries (e.g., Brazil and Mexico), the crisis extended relatively quickly to the other acutely exposed economies (e.g., Venezuela and the Philippines).

Spot FX vs Relevant FX (Indexed to August 1982)



Today, when we look past Turkey and Argentina to the broader emerging world, we see fewer countries at risk of crisis than in historical cases of contagion. The table below shows what these exposures look like: only Argentina and Turkey stand out as highly susceptible countries, given their large funding needs, high level of external debts, low reserves, and small share of local currency debt. A handful of other countries (e.g., South Africa, Chile, and Brazil) are moderately exposed, but not to the same extent that we saw in past cases.

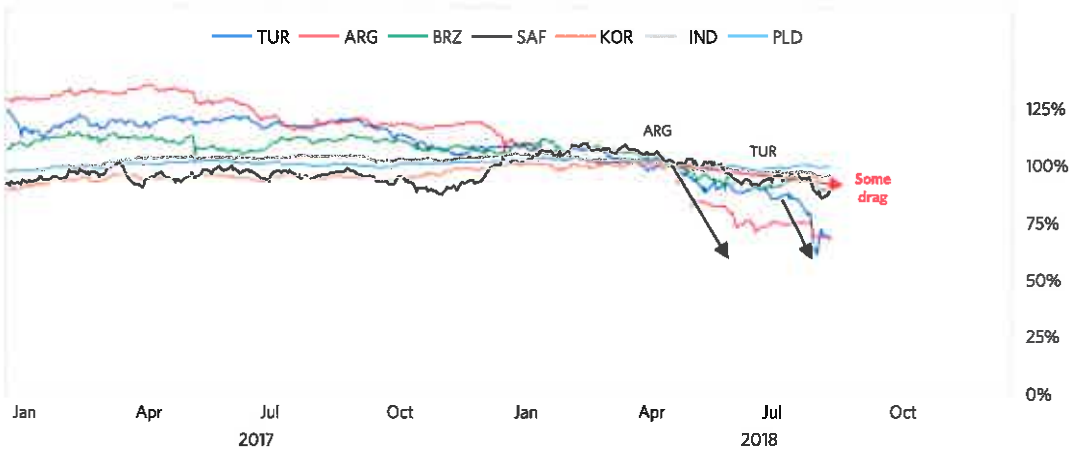
Today: Emerging Market Susceptibility

	Reliance on Foreign Capital				Ability to Manage			
Country	Current Account (%GDP)	Financial Inflows (%GDP)	Hard FX Ext Debt (%GDP)	ST Ext Debt (%Total Ext)	FX Pegged or Heavily Managed	Net Reserves (%GDP)	Ext Debt in Local FX (%Total)	Aggregate Susceptibility
Argentina	-5%	9%	31%	10%	No	3%	13%	
Turkey	-7%	3%	45%	16%	No	1%	6%	
Chile	-1%	4%	54%	14%	No	19%	8%	Med
South Africa	-3%	7%	19%	--	No	11%	59%	Med
Indonesia	-2%	1%	25%	8%	No	6%	15%	Med
Brazil	-1%	1%	28%	6%	No	14%	4%	Med
Hungary	3%	-2%	59%	25%	No	8%	23%	Med/Low
Poland	0%	-1%	49%	11%	No	13%	--	Med/Low
Malaysia	4%	4%	55%	24%	No	17%	15%	Med/Low
Czech Republic	1%	-1%	68%	32%	Yes	51%	--	Med/Low
Taiwan	14%	4%	26%	23%	No	58%	--	Med/Low
Mexico	-1%	2%	25%	7%	No	10%	25%	Med/Low
India	-2%	5%	13%	5%	No	12%	36%	Med/Low
Philippines	-1%	0%	17%	5%	No	19%	3%	
Peru	-1%	1%	27%	7%	No	19%	--	
Thailand	12%	2%	19%	13%	No	40%	35%	
Russia	3%	-1%	22%	6%	No	21%	27%	
South Korea	5%	2%	20%	8%	No	26%	27%	

Most EM's not very susceptible to a pullback

While the susceptibility is generally lower across the EM today, the sell-offs in Turkey and Argentina have, to some extent, spilled out into some of the more exposed EM markets mentioned above—though, consistent with the extent of their susceptibility, the extent of the sell-off has been notably less severe than in past cases of material contagion.

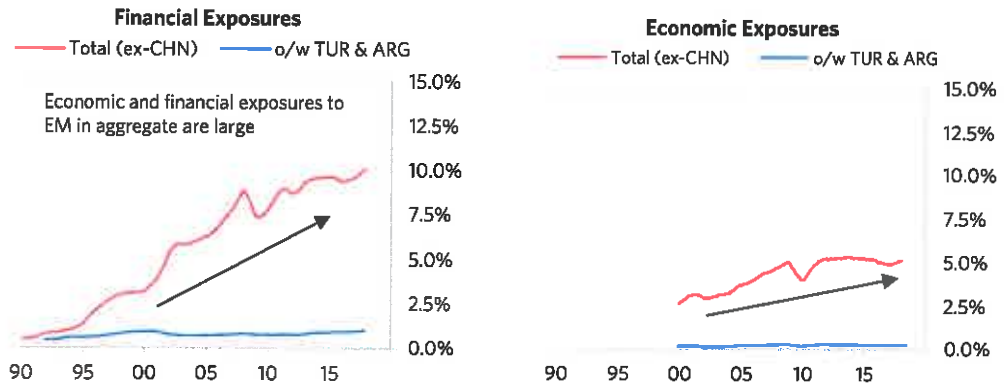
Spot FX vs Relevant FX (Indexed to May 2018)



Although Financial Exposure to the Emerging World Is at Secular Highs, These Exposures Are Held by Less Concentrated and Less Levered Players

Less susceptibility does not mean that risks do not exist: the absolute size of the world's outright exposures to emerging markets is the largest it's ever been. The high degree of global interconnectedness means that a larger-than-discounted pullback in dollar liquidity will always generate some level of funding stress for dollar borrowers, and sustained periods of EM stress will still be painful for investors. The key difference today is that the links between the countries most exposed, other vulnerable EMs, and the broader global economy are more balanced, coming from a less concentrated pool of creditors who are also less levered, and, as a consequence, reduce the risk of forced selling and broad, fast-moving, EM contagion.

Exposure to Emerging World (% World GDP)



The by-country exposure to emerging markets is consistent with the picture above. Compared to past cases, however, exposures are both less concentrated within a single creditor country and less concentrated within particular types of creditors. In previous lending booms, like the Latin American period in the late 1970s and 1980s or the 1990s lending boom to Asia, nearly all of the lending came from a handful of developed world banks and, as a result, the global banking system was acutely exposed to crises in the emerging world. Today, lenders are relatively spread out across a set of developed countries, while lending has increasingly come in the form of portfolio exposures as capital markets deepened.

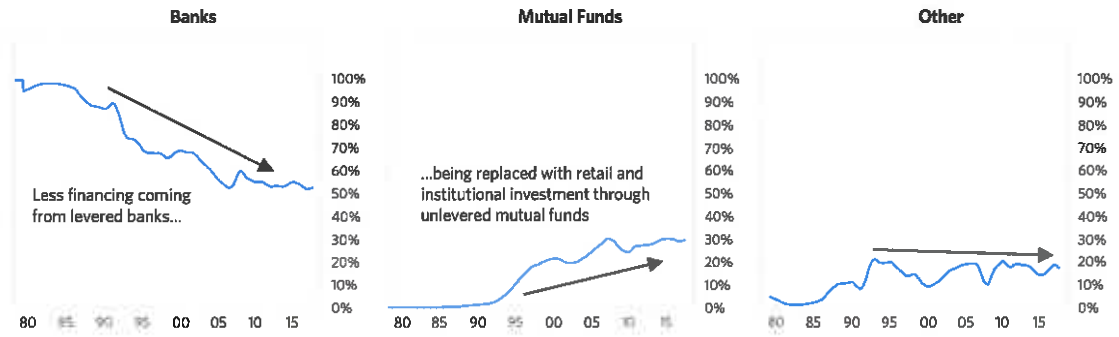
Major Economy Financial Exposures to EM (%GDP)

	Banking		Portfolio		Total		
	TUR & ARG	EM Total	TUR & ARG	EM Total	TUR & ARG	EM Total	
United Kingdom	0.8%	14%	0.4%	15%	1.3%	29%	The UK and Euroland are particularly exposed
Euroland*	1.8%	11%	0.7%	11%	2.5%	22%	
Japan	0.2%	8%	0.1%	6%	0.4%	14%	
Switzerland	--	--	0.4%	13%	--	13%	
Sweden	0.1%	1%	0.2%	9%	0.2%	10%	
United States	0.1%	3%	0.4%	6%	0.5%	9%	
Canada	--	0%	0.1%	8%	--	8%	
Australia	0.0%	2%	0.1%	6%	0.1%	8%	

**Euroland here refers to Germany, France, Italy, and Spain*

In short, the mix of lenders to the emerging world today is considerably different relative to past cases of contagion. Banks, which had represented nearly 90% of the exposures in the 1980s, are now responsible for roughly 50% of total lending. The rest is split between developed world mutual fund investors, which generally represent unleveraged retail investors, and other players (e.g., hedge funds). By and large this is healthy, although recently there has been a notable trend following selling by index investors, which has caused some modest—but limited, due to the lack of leverage—contagion.

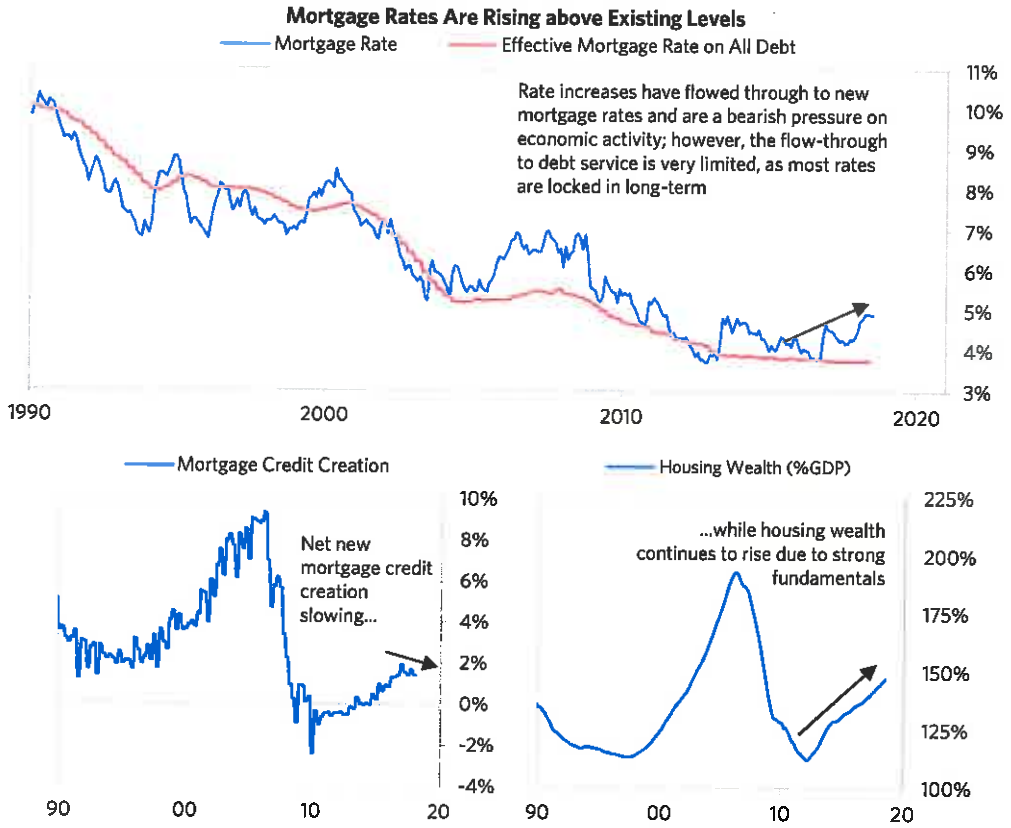
Financial Investment into Emerging World by Player (%Total)



Higher Rates Are Having Only a Modest Impact on the Housing Market, Making the Expansion More Resilient

Cansu Aydede | Paul Pasciucco | Jacob Miller

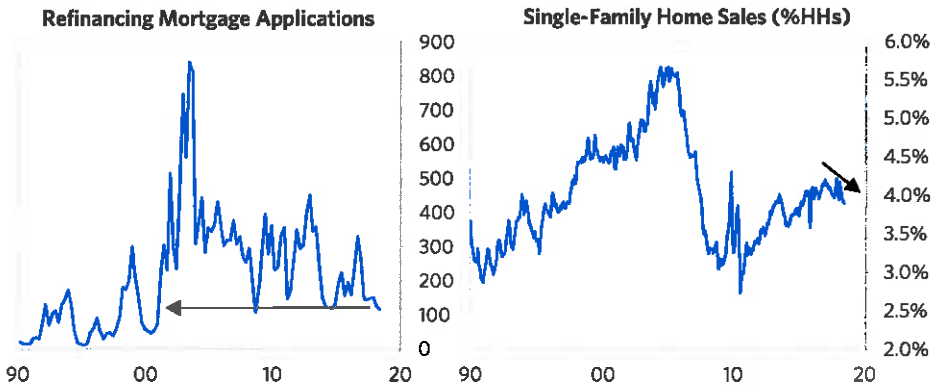
The Fed's tightening is gradually flowing through to interest rates facing consumers and decreasing their demand for big-ticket items financed by credit (e.g., home purchases). So far this cycle, the impact of rising rates has been somewhat offset by other drivers of the housing market. This has reduced the impact of the slowdown in mortgage credit on the broader economy. Spending on homes financed by borrowing has flatlined in line with the increased rates, but pent-up demand from new home buyers combined with limited housing supply have continued to drive house price appreciation, supporting household wealth. Interest rates are rising, but the fact that wealth is continuing to increase makes household balance sheets, and therefore household spending, more resilient to tightening. Furthermore, new home sales, which have been the most resilient, ultimately matter more to the economy than existing sales, because they support new construction. The net result is that despite higher rates somewhat depressing demand for borrowing, the overall effect of this slowdown on households and the economy is muted. Below, we walk through the various cross-currents on housing, including both how higher rates shown below are flowing through and how some of the drivers are cutting the other way.



Below, we explore each of these channels and supply dynamics in more depth.

Much of the Slowdown in Mortgage Credit Creation Is Coming from Refinancing and Existing Home Sales, Which Typically Respond to Financial Incentives

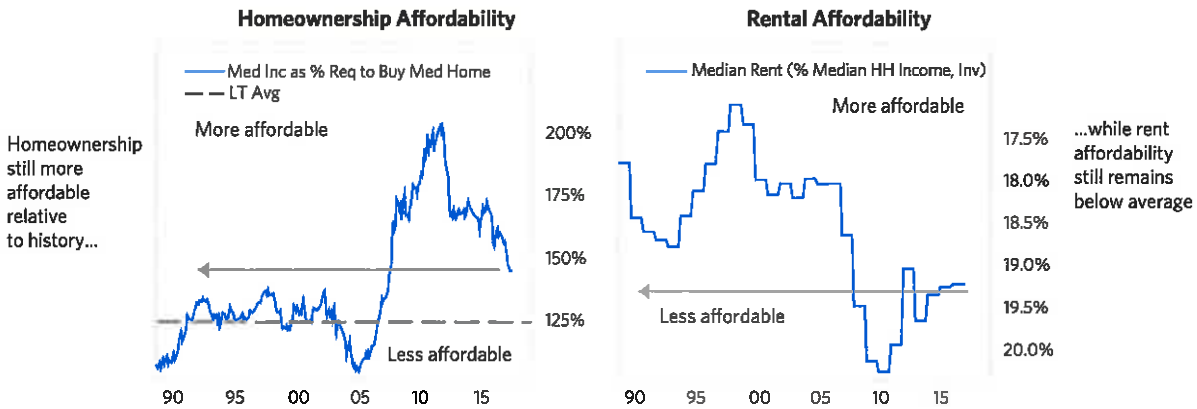
Today, refinancing activity has fallen to decade lows as the interest rates facing borrowers on new mortgages are exceeding those on existing mortgages, reducing the incentive for households with existing loans to refinance. Sales of existing homes are also slowing, and they reflect a mix of financial and real economy incentives. While households do move for reasons unrelated to the economy, they typically look at the relative rates they are paying, as well as how much equity they have built up in their homes. Typically, when households have experienced good returns and new rates are lower or similar to the rates they are paying, there is a low barrier to either trading up or moving homes. Today, they face appreciating home prices but higher rates, slowing activity.



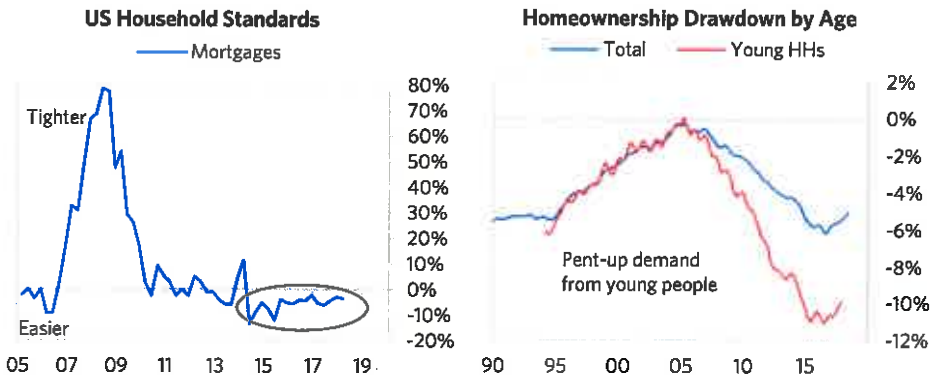
New Home Sales, Which Matter More to the Broader Economy, Are Being Supported by Pent-Up Demand

New homeownership is typically the most economically impactful form of mortgage credit creation as it creates the most economic impact through new construction, as well as a larger creation of debt due to the lack of existing debt on new housing stock. Despite the rising rates, the incentives for new homeowners to continue purchasing homes are pretty robust, given easing standards and continued high confidence due to economic strength. After a decade of basically no net new homeownership, we have seen strong growth in owner households, which is outpacing construction significantly.

On affordability, while buying has become more expensive, homeownership remains cheap relative to the past at a time when renting remains expensive relative to history, pushing more young households toward homeownership.

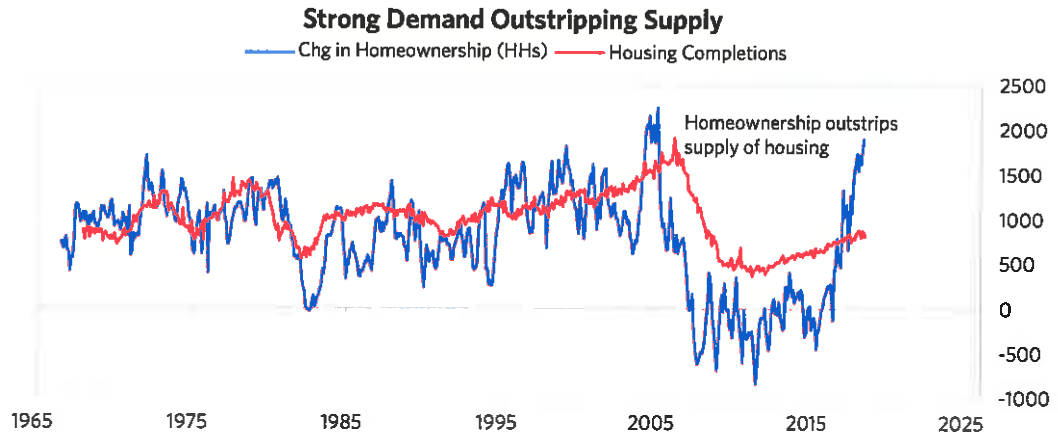


Standards have also started to soften for mortgages, which should help bring buyers who could not access mortgage credit into the market even as rates rise. For potential new homeowners, these easing standards should continue to draw new entrants into the market. This is particularly impactful for younger home buyers, who have seen a more pronounced drop in homeownership relative to the rest of the population due to a residual hit to employment and income from the financial crisis.



Tight Supply Is Mitigating the Impact of Lower Activity on Prices

Given the level of construction, the hurdle rate for new home buyers is fairly small; currently, the pace of new home buyers is significantly outpacing the rate of construction. And while this can't go on for an extended period, the drawdown in homeownership should provide some room for home prices to continue to rise.



Lastly, inventories that are near historical lows are somewhat constraining activity, as households struggle to find homes for sale. One signal of this squeeze on home supply is how little time homes are spending on the market, as shown below. The faster homes are selling, the tigher supply is, and the more likely supply is to be constraining the overall level of activity. Below, one can see the total listed inventories as well as how long homes are remaining on the market, further holding up home prices.