

## Catastrophe Briefing

Hurricane Harvey Estimated Reported Losses

Company	Туре	Insured Loss Min Estimate (bn)	Insured Loss Max Estimates (bn)	Economic Loss Min Estimate (bn)	Economic Loss Max Estimate (bn)	Notes – last update as of Sept 19, 2017
AccuWeather	Hazard			\$0.0	\$190.0	Estimate remains at \$190 as of 9/18
CEDIM	Hazard			\$41.0	\$75.0	Estimate from Center for Disaster Management and Risk Reduction Technology; estimating 90% of loss from flooding. As of 8/31
Enki Research	Hazard			\$48.0	\$75.0	Estimating 70% or 75% of the losses and impact from this storm will not be insured; estimation process they typically use for hurricanes does not work as well in this type of storm. As of 8/31
Berkshire Hathaway	Investment	\$5.0	\$20.0			Many factors unknown; high proportion of uninsured losses to insured losses compared to most events. GEICO insures 500,000 cars with a 10% market share in Texas. As of 8/30
Barclays	Investment	\$10.0	\$25.0			The ultimate impact on insurers and reinsurers is likely to be absorbable within a single quarter of earnings for most major insurance companies. As of 8/30
JP Morgan	Investment	\$15.0	\$15.0	\$35.0	\$80.0	As of 9/13
Morgan Stanley	Investment	\$15.0	\$40.0			Estimate includes: wind - \$2-4bn, auto loss - \$3-6bn, commercial flooding - \$5 – 15bn and NFIP - \$5-15bn. As of 9/1
Goldman Sachs	Investment					Impact across structured products is material - \$45mn in credit losses. As of 8/30
CoreLogic	Modeling Company	\$7.5	\$11.5			Wind only loss \$1 - 2bn. Inland, flash and storm surge flooding estimate \$6.5 bn and \$9.5 bn. Residential uninsured flood loss for the same area is estimated to be between \$18 bn and \$27 bn. As a result, an estimated 70 percent of flood damage from Hurricane Harvey is not covered by any insurance. As of 9/5
AIR	Modeling Company	\$10.0		\$65.0	\$75.0	Insured loss estimate is a minimum of \$10bn to include wind, surge and flood. Does not include NFIP losses. Economic loss figures include damage to all properties eligible for flood coverage regardless of whether they are actually insured and without any application of deductibles or limits. Economic loss estimates do not include wind or storm surge. As of 9/6
RMS	Modeling Company	\$25.0	\$35.0	\$70.0	\$90.0	This includes wind, surge and flood for residential, commercial, industrial and auto lines of business. This also includes demand surge and the NFIP losses. Upper bound of insured loss could reach \$40bn. The wind and surge loss estimate remains at \$1.5bn to \$3bn. As of 9/8
Karen Clark & Co	Modeling Company	\$12.4	\$15.4			Inland flooding will drive losses with this accounting for 80.5% of the industry loss estimate at \$12.4bn. This estimate does not include losses for the NFIP. As of 9/1
A.M. Best	Rating Agency	\$8.0	\$20.0			AMB does not anticipate significant rating actions. Stated that initial estimates for insured losses ranged from \$8 billion to \$20 billion. As of 8/31.
Moody's	Rating Agency	\$10.0	\$40.0	\$81.0	\$108.0	The ratings agency said that it will take some time to determine the magnitude of insured damages but insurers with exposure to Texas are at risk of incurring "meaningful losses", although Moody's expect losses to be manageable relative to earnings. Insured loss estimate breakdown: Auto (\$30 -\$40bn) Property (\$10-\$15bn). As of 9/1

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Fitch	Rating Agency					Fitch believes most rated (re)insurers will be able to withstand combined losses from Hurricanes Irma and Harvey. Still, another large loss occurrence within a short period could lead to more substantial changes in capital causing more broadly negative rating actions for (re)insurers. With roughly two months left in the Atlantic hurricane season the potential for additional storm losses on top of those incurred from Hurricanes Irma and Harvey remains a concern. As of 9/13
S&P	Rating Agency					Likely to have only a limited impact on the financial strength and credit ratings of affected insurers and reinsurers. Hurricane Harvey will probably be an earnings event rather than a capital event for insurers and reinsurers. As of 8/29
Munich Re	Reinsurer	\$25.0	\$30.0			The evaluation of losses is complex due the prevalence of flooding. It will take a long while, not just a few days or weeks, buy maybe months or even a year for the loss figures for the entire sector to be reliable and stable. As of 9/10
FEMA	Government		\$11.0			The head of the National Flood Insurance Program said early estimates show Hurricane Harvey will result in about \$11 billion in payouts to insured homeowners, mostly in southeast Texas. As of 9/13
Insurance Council of Texas	Industry		\$19.0			Includes \$11bn for NFIP, \$3bn of private property losses and a record-setting \$4.75 billion of private and commercial auto insured losses. As of 09/15
PCS	Industry		\$15.9			Estimated insured losses payments as of 9/19. PCS expects these estimates are not fully developed and they will resurvey in 60 days. Does not include approximately \$1.4bn of LAE. Does not include NFIP.
NFIP	Government					NFIP estimates it will make \$11 billion in payments for flooding in Texas caused by Harvey

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