

## A Brief “Shutdown Innings” Study

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We heard a lot about “shutdown innings” last year. During a game, fans would exhale in relief when their team’s pitcher delivered one, and sigh in frustration when they didn’t. According to the in-game bloggers, reporters, and announcers, the “shutdown inning” holds some magical power to either continue a team’s momentum or absolutely stop it dead in its tracks. Lacking the requisite degree in the field, I can’t assess the psychological damage a non-shutdown inning can inflict on a team, but my non-clinical experience watching baseball for 40 years tells me it most certainly hurts their chances of winning. I mean, anytime you let the *other* team score runs, it’s detrimental to *your* chances, right? The problem is, I have no idea if one team is better or worse than any other team, and, importantly, what the expected performance in those situations should be. I know it doesn’t feel good when a shutdown inning doesn’t happen for my team, but is it happening less for my team than other teams? Are one team’s pitchers less “clutch” than everyone else when it comes to the “shutdown inning”?

Thanks to the good folks at Retrosheet ([www.retrosheet.org](http://www.retrosheet.org)), we can try and take a look at the numbers and see what’s actually happening. Retrosheet has game summaries for the majority of the games played since 1900, and the summary for each game includes the linescore for each team. Armed with all that info, I wrote a computer program to read those game logs and calculate a “Shutdown Inning %” for every team and league for all the seasons available from Retrosheet. If you’re into this kind of stuff, it’s pretty interesting, and maybe it’ll shed some light on how good (or bad) pitchers have been doing shutting down opposing offenses.

First, some definitions:

### **Definition #1: “Shutdown Opportunity” (SDOp)**

*An inning in which your opponent comes to bat immediately following an inning in which you score one or more runs constitutes a Shutdown Opportunity. Sometimes, your team scores but your opponent doesn’t come to bat. Example 1: If you score 2 runs in the top of the ninth but still lose, 8-2, your opponent doesn’t bat in the bottom of the 9<sup>th</sup>, so that’s not a “shutdown opportunity.” Example 2: If you score 1 run in the bottom of the twelfth and win, 3-2, your opponent doesn’t bat in the top of the 13<sup>th</sup>, so that’s not a “shutdown opportunity.”*

### **Definition #2: “Shutdown Inning” (SDI)**

*Given a Shutdown Opportunity, preventing your opponent from scoring any runs immediately following an inning in which you score constitutes a Shutdown Inning. Example 1: If you score 2 runs in the top of the second, and your opponent scores 0 runs in the bottom of the second, that’s a “shutdown inning.” Example 2: if you score 8 runs in the bottom of the second, and your opponent scores 0 runs in the top of the third, that’s a “shutdown inning.”*

### **Definition #3: “Shutdown Inning Percentage” (SDI%)**

The # of Shutdown Innings divided by the # of Shutdown Opportunities, multiplied by 100.

Without further ado, here are the Shutdown Inning numbers for 2015:

Team	Lg	SDOp	SDI	SDI%
<b>SLN</b>	<b>NL</b>	<b>348</b>	<b>278</b>	<b>79.9</b>
<b>NYN</b>	<b>NL</b>	<b>368</b>	<b>291</b>	<b>79.1</b>
<b>TBA</b>	<b>AL</b>	<b>361</b>	<b>275</b>	<b>76.2</b>
<b>WAS</b>	<b>NL</b>	<b>374</b>	<b>284</b>	<b>75.9</b>
<b>OAK</b>	<b>AL</b>	<b>351</b>	<b>266</b>	<b>75.8</b>
NYA	AL	382	289	75.7
SEA	AL	357	268	75.1
CHA	AL	343	257	74.9
KCA	AL	383	287	74.9
LAN	NL	355	266	74.9
HOU	AL	393	293	74.6
TOR	AL	429	316	73.7
MIA	NL	341	251	73.6
SFN	NL	369	271	73.4
<b>---</b>	<b>MLB</b>	<b>10961</b>	<b>8044</b>	<b>73.4</b>
SDN	NL	350	256	73.1
ANA	AL	352	257	73.0
CHN	NL	367	267	72.8
ARI	NL	399	290	72.7
CIN	NL	355	258	72.7
ATL	NL	314	228	72.6
CLE	AL	370	268	72.4
MIL	NL	362	262	72.4
PIT	NL	379	274	72.3
BAL	AL	367	264	71.9
TEX	AL	384	274	71.4
<b>BOS</b>	<b>AL</b>	<b>390</b>	<b>276</b>	<b>70.8</b>
<b>MIN</b>	<b>AL</b>	<b>346</b>	<b>245</b>	<b>70.8</b>
<b>PHI</b>	<b>NL</b>	<b>326</b>	<b>229</b>	<b>70.2</b>
<b>DET</b>	<b>AL</b>	<b>369</b>	<b>258</b>	<b>69.9</b>
<b>COL</b>	<b>NL</b>	<b>377</b>	<b>246</b>	<b>65.3</b>

**SDOp** = Shutdown Opportunities

**SDI** = Shutdown Innings

**SDI%** = Shutdown Inning %

(Note: I originally wrote this to find out this information for the Orioles).

In 2015, The O's were towards the bottom of the list, at 71.9%; the MLB Average was 73.4%.

Here's how the O's have done for the previous 10 seasons, 2006-2015:

Year	Shutdown Opps	Shutdown Innings	Shutdown Inning%	MLB%	AL%	NL%
2015	367	264	71.9	73.4	73.4	73.4
2014	360	269	74.7	74.3	74.3	74.4
2013	402	292	72.6	74.5	73.9	75.0
2012	381	290	76.1	73.1	72.0	74.1
2011	384	259	67.4	72.9	72.2	73.5
2010	342	241	70.5	73.2	72.8	73.6
2009	368	266	72.3	72.0	71.7	72.3
2008	406	285	70.2	72.1	72.3	71.9
2007	387	274	70.8	71.9	71.4	72.3
2006	398	274	68.8	71.0	71.1	70.9

That's 3 up and 7 down over the last 10. For most of those seasons, the bullpen has been pretty solid; when the starters have been decent-to-good, they've been close or better than the league.

Generally speaking, during the DH era, the NL has been a tick better than the AL. That makes sense: the harder it is to score runs, the easier it is to record a shutdown inning. As a consequence, seasons during “live-ball” eras have seen the lowest Shutdown Inning%, while those in “dead-ball” eras the highest.

**Lowest Shutdown Inning% Seasons since 1900 (<70%)**

<b>Year</b>	<b>Shutdown Inning%</b>
1930	68.2
1925	68.4
1929	68.4
2000	68.7
1999	69.1
1994	69.5
1936	69.7

**Highest Shutdown Inning% Seasons since 1900 (>=76%)**

<b>Year</b>	<b>Shutdown Inning%</b>
1968	78.2
1918	77.6
1909	77.1
1917	76.7
1972	76.7
1904	76.0

Here are the teams with the best and worst Shutdown Inning%, since 1900.

**Lowest Shutdown Inning% Teams since 1900 (<62%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown Inning%
1999	COL	436	258	59.2
1923	PHI	369	220	59.6
1956	WS1	343	209	60.9
1925	PHI	398	243	61.1
1931	CHA	358	219	61.2
1996	COL	451	276	61.2
1998	FLO	369	227	61.5
1921	PHA	344	212	61.6
1994	DET	315	194	61.6
1941	PHA	352	218	61.9

**Highest Shutdown Inning% Teams since 1900 (>82%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown Inning%
1918	CHN	284	240	84.5
1909	CHN	345	291	84.3
1918	NY1	254	212	83.5
1968	OAK	332	277	83.4
1942	SLN	390	325	83.3
1909	PIT	385	319	82.9
1968	SFN	326	270	82.8
1989	NYN	367	304	82.8
1972	OAK	323	267	82.7
1919	CHN	269	222	82.5
1917	PHI	318	262	82.4
1915	WS1	311	256	82.3
1910	CHN	377	310	82.2
1933	NY1	330	271	82.1

Here are the teams with the best and worst Shutdown Inning% over the last 25 seasons, since 1991.

**Lowest Shutdown Inning% Teams since 1991 (<65%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown Inning%
1999	COL	436	258	59.2
1996	COL	451	276	61.2
1998	FLO	369	227	61.5
1994	DET	315	194	61.6
2001	TEX	456	284	62.3
1996	DET	391	244	62.4
1994	MIN	300	188	62.7
2000	KCA	425	268	63.1
2000	COL	458	292	63.8
2000	MON	400	255	63.8
1999	CHN	379	243	64.1
1997	OAK	391	251	64.2
2003	DET	335	215	64.2
1994	CHN	278	179	64.4
1993	COL	389	251	64.5
1999	SEA	422	272	64.5
1994	TEX	311	201	64.6
2001	CIN	370	239	64.6
1999	DET	402	260	64.7
2004	CIN	380	246	64.7
1996	BAL	435	282	64.8
1995	SFN	356	231	64.9

**Highest Shutdown Inning% Teams since 1991 (>=78%)**

<b>Year</b>	<b>Team</b>	<b>Shutdown Opps</b>	<b>Shutdown Innings</b>	<b>Shutdown Inning%</b>
2014	SLN	338	274	81.1
2014	ANA	401	325	81.0
2002	ATL	377	303	80.4
2011	CHA	360	288	80.0
<b>2015</b>	<b>SLN</b>	<b>348</b>	<b>278</b>	<b>79.9</b>
2012	LAN	347	277	79.8
2013	PIT	357	285	79.8
2011	PHI	385	306	79.5
2014	OAK	356	283	79.5
<b>2015</b>	<b>NYN</b>	<b>368</b>	<b>291</b>	<b>79.1</b>
2003	LAN	349	275	78.8
2013	CIN	382	301	78.8
2014	SEA	328	258	78.7
2014	WAS	361	284	78.7
1992	SFN	320	251	78.4
2010	SFN	369	289	78.3
2013	TBA	387	303	78.3
2007	SDN	386	301	78.0
2011	ATL	350	273	78.0
2012	ATL	377	294	78.0

### Expected Shutdown Inning%

OK, so the MLB Shutdown Inning% is roughly 70-75%, depending on the level of offense. On the flip side, that means that the non-Shutdown% is 25-30%. In 2015, it was 73% (27% non-Shutdown). The question is, is that % to be expected, or do pitchers on the whole bear down and, in those “shutdown” situations, hold teams scoreless at a higher rate than normal? Well, after running through the linescores, the answer is: not really. On the whole, teams hold their opponents scoreless in “shutdown situations” at the same rate as they do overall:

Year	O-Run Innings % (Expected Shutdown Inning%)	Shutdown Innings%
2015	73.4	73.4
2014	74.5	74.3
2013	73.8	74.5
2012	72.9	73.1
2011	73.2	72.9
2010	72.9	73.2
2009	71.8	72.0
2008	71.8	72.1
2007	71.1	71.9
2006	70.7	71.0
2005	72.1	71.6
2004	71.0	70.8
2003	71.1	71.1
2002	71.8	72.7
2001	71.0	70.8
2000	69.5	68.7
1999	69.6	69.1
1998	70.8	70.6
1997	70.7	70.5
1996	70.2	70.4
1995	70.8	70.6
1994	70.1	69.5
1993	71.4	71.2
1992	74.1	73.8
1991	73.2	73.0

It may be that hitters are bearing down and trying to get those runs back as much as pitchers are bearing down trying to prevent them... which, as it turns out, is the way it goes pretty much every inning. Plus, the hitters your pitcher is going to have to face for a shutdown inning are going to be random over the course of the season: you may be facing the top of the order, the heart of the order, or the bottom, or some other spot in the middle. If you were unlucky enough to face Donaldson, Bautista, and Encarnacion immediately, every time your team scored, it might be tougher to keep your SDI% up!



### Late Game “Shutdown Innings”

Given the rise of “shutdown bullpens,” I wanted to see if the SDI% would be higher or lower in the late innings of games, the 7<sup>th</sup> inning and later\*, and if top bullpens would push some teams to the top.

2015	Shutdown Opps (>=7 <sup>th</sup> )	Shutdown Innings (>= 7 <sup>th</sup> )	Shutdown Inning% (>= 7 <sup>th</sup> )
<b>SLN</b>	<b>118</b>	<b>101</b>	<b>85.6</b>
<b>NYN</b>	<b>137</b>	<b>110</b>	<b>80.3</b>
<b>CHA</b>	<b>124</b>	<b>97</b>	<b>78.2</b>
<b>SEA</b>	<b>113</b>	<b>88</b>	<b>77.9</b>
<b>ARI</b>	<b>135</b>	<b>105</b>	<b>77.8</b>
KCA	132	102	77.3
CIN	113	87	77.0
HOU	145	110	75.9
OAK	124	94	75.8
WAS	127	96	75.6
SDN	129	97	75.2
SFN	126	94	74.6
MIA	112	83	74.1
NYA	135	100	74.1
LAN	111	82	73.9
MIL	118	87	73.7
<b>MLB</b>	<b>3732</b>	<b>2748</b>	<b>73.6</b>
ATL	115	84	73.0
TEX	124	90	72.6
BAL	127	92	72.4
MIN	112	81	72.3
TOR	136	98	72.1
CHN	106	75	70.8
PHI	113	80	70.8
ANA	122	85	69.7
PIT	135	94	69.6
<b>BOS</b>	<b>134</b>	<b>93</b>	<b>69.4</b>
<b>TBA</b>	<b>133</b>	<b>92</b>	<b>69.2</b>
<b>CLE</b>	<b>131</b>	<b>90</b>	<b>68.7</b>
<b>COL</b>	<b>122</b>	<b>82</b>	<b>67.2</b>
<b>DET</b>	<b>123</b>	<b>79</b>	<b>64.2</b>

\*If you are the Home Team, your Shutdown Opps begin in the bottom of the 6<sup>th</sup>, which gives your staff the top of the 7<sup>th</sup> and later to record a Shutdown Inning. If you are the Visiting Team, your Shutdown Opps begin in the top of the 7<sup>th</sup>, which gives your staff the last of the 7<sup>th</sup> and later to record a Shutdown Inning.

The Cardinals' "Late" performance last year was one of the best in history, based on the Retrosheet data. Given their league-leading 2.94 ERA, it was definitely a team effort.

Here are the teams with the best and worst Late Game Shutdown Inning%, since 1900.

**Lowest Late Game Shutdown Inning% Teams since 1900 (<60%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown Inning%
1939	PHI	94	52	55.3
1961	CHN	116	66	56.9
2011	MIN	100	58	58.0
1940	PHA	117	68	58.1
1994	MIN	91	53	58.2
1934	BOS	127	74	58.3
1999	KCA	150	88	58.7
1929	NY1	147	87	59.2
1925	PHI	135	80	59.3
1929	WS1	133	79	59.4
1951	PIT	128	76	59.4
1998	ARI	128	76	59.4
2000	TEX	152	91	59.9

**Highest Late Game Shutdown Inning% Teams since 1900 (>=85.5%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown%
1942	SLN	138	123	89.1
1909	PIT	143	125	87.4
1981	SFN	82	71	86.6
1989	KCA	129	111	86.0
1972	PIT	120	103	85.8
1912	BOS	140	120	85.7
1943	DET	126	108	85.7
2013	KCA	126	108	85.7
2002	CHA	153	131	85.6
<b>2015</b>	<b>SLN</b>	<b>118</b>	<b>101</b>	<b>85.6</b>
2006	NYN	124	106	85.5

Here are the teams with the best and worst Late Game Shutdown Inning% over the last 25 seasons, since 1991.

**Lowest Late Game Shutdown Inning% Teams since 1991 (<65%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown Inning%
2011	MIN	100	58	58.0
1994	MIN	91	53	58.2
1999	KCA	150	88	58.7
1998	ARI	128	76	59.4
2000	TEX	152	91	59.9
1997	CHA	139	84	60.4
1995	CHN	130	80	61.5
2013	HOU	104	64	61.5
1994	BOS	97	60	61.9
1995	MIL	125	78	62.4
2002	CLE	121	76	62.8
1990	ATL	143	90	62.9
2009	WAS	127	80	63.0
1999	COL	148	94	63.5
2006	BAL	126	80	63.5
2001	MIN	138	88	63.8
1999	LAN	147	94	63.9
2004	COL	155	99	63.9
<b>2015</b>	<b>DET</b>	<b>123</b>	<b>79</b>	<b>64.2</b>
1998	FLO	118	76	64.4
2012	ANA	118	76	64.4
1994	NYN	107	69	64.5
2001	TEX	147	95	64.6
1996	HOU	136	88	64.7
1995	CHA	125	81	64.8
2001	CIN	134	87	64.9

**Highest Late Game Shutdown Inning% Teams since 1991 (>=82%)**

Year	Team	Shutdown Opps	Shutdown Innings	Shutdown Inning%
2013	KCA	126	108	85.7
2002	CHA	153	131	85.6
<b>2015</b>	<b>SLN</b>	<b>118</b>	<b>101</b>	<b>85.6</b>
2006	NYN	124	106	85.5
2003	LAN	130	111	85.4
2014	SLN	111	94	84.7
2013	SDN	122	103	84.4
2014	TBA	112	94	83.9
2004	OAK	121	101	83.5
2011	SDN	108	90	83.3
1992	CHA	113	94	83.2
2012	OAK	119	99	83.2
2014	OAK	118	98	83.1
2013	ANA	128	106	82.8
2013	CIN	116	96	82.8
2014	ANA	139	115	82.7
2013	OAK	132	109	82.6
1992	MIN	131	108	82.4
2008	TOR	124	102	82.3

By the way, the same comparison between the Expected Shutdown Inning% and the Actual Shutdown Inning% holds true for the 7<sup>th</sup> inning and later situation. The differences are not significant, and the results are pretty much as expected:

Year	0-Run Innings % (Expected Shutdown Inning%)	Shutdown Innings%
2015	73.6	74.3
2014	75.5	75.8
2013	74.8	76.7
2012	73.9	74.6
2011	74.0	73.9

## Comeback “Shutdown Innings”

OK...I’ll take a walk down one more side street. In the previous sections, I didn’t take into account the score of the game when a team put some runs on the board. But, one of the most important times when you want to get the Shutdown Inning is when you’ve just scored to tie the game or take the lead, right? So, I filtered the data by that criterion: if you were behind and scored some runs to tie the game or take the lead, or if you were tied and scored some runs to take the lead, I counted that as a Shutdown Opportunity.

2015	Shutdown Opps	Shutdown Innings	Shutdown Inning%
<b>SLN</b>	<b>195</b>	<b>160</b>	<b>82.1</b>
<b>NYN</b>	<b>184</b>	<b>149</b>	<b>81.0</b>
<b>KCA</b>	<b>205</b>	<b>160</b>	<b>78.0</b>
<b>WAS</b>	<b>198</b>	<b>153</b>	<b>77.3</b>
<b>TBA</b>	<b>197</b>	<b>152</b>	<b>77.2</b>
NYA	187	144	77.0
LAN	192	146	76.0
TOR	196	148	75.5
CHN	199	150	75.4
SEA	188	140	74.5
SFN	176	131	74.4
PIT	195	145	74.4
CIN	187	139	74.3
ATL	171	127	74.3
OAK	181	134	74.0
<b>MLB</b>	<b>5590</b>	<b>4110</b>	<b>73.5</b>
ANA	177	130	73.4
SDN	180	132	73.3
MIL	161	117	72.7
CLE	172	125	72.7
CHA	194	140	72.2
HOU	204	147	72.1
TEX	186	133	71.5
DET	182	130	71.4
ARI	188	134	71.3
MIA	180	126	70.0
<b>MIN</b>	<b>188</b>	<b>131</b>	<b>69.7</b>
<b>BOS</b>	<b>180</b>	<b>125</b>	<b>69.4</b>
<b>PHI</b>	<b>165</b>	<b>113</b>	<b>68.5</b>

<b>BAL</b>	<b>186</b>	<b>127</b>	<b>68.3</b>
<b>COL</b>	<b>196</b>	<b>122</b>	<b>62.2</b>

So, are there teams that do better in one scenario (All, Late, or Comeback) than the others? Let's take a look:

<b>2015</b>	<b>All Shutdown%</b>	<b>Late Shutdown%</b>	<b>Comeback Shutdown Inning%</b>
ANA	73.0	69.7	73.4
ARI	72.7	77.8	71.3
ATL	72.6	73.0	74.3
BAL	71.9	72.4	68.3
BOS	70.8	69.4	69.4
CHA	74.9	78.2	72.2
CHN	72.8	70.8	75.4
CIN	72.7	77.0	74.3
CLE	72.4	68.7	72.7
COL	65.3	67.2	62.2
DET	69.9	64.2	71.4
HOU	74.6	75.9	72.1
KCA	74.9	77.3	78.0
LAN	74.9	73.9	76.0
MIA	73.6	74.1	70.0
MIL	72.4	73.7	72.7
MIN	70.8	72.3	69.7
NYA	75.7	74.1	77.0
NYN	79.1	80.3	81.0
OAK	75.8	75.8	74.0
PHI	70.2	70.8	68.5
PIT	72.3	69.6	74.4
SDN	73.1	75.2	73.3
SEA	75.1	77.9	74.5
SFN	73.4	74.6	74.4
SLN	79.9	85.6	82.1
TBA	76.2	69.2	77.2
TEX	71.4	72.6	71.5
TOR	73.7	72.1	75.5
WAS	75.9	75.6	77.3
<b>MLB</b>	<b>73.4</b>	<b>73.6</b>	<b>73.5</b>

Here are the MLB averages for the last 10 seasons:

	<b>Shutdown Inning Percentage</b>		
<b>Year</b>	<b>All</b>	<b>Late</b>	<b>Comeback</b>
2015	73.4	73.6	73.5
2014	74.3	75.8	74.9
2013	74.5	76.7	74.5
2012	73.1	74.6	72.6
2011	72.9	73.9	73.3
2010	73.2	74.6	73.5
2009	72.0	74.0	72.3
2008	72.1	73.3	71.9
2007	71.9	75.0	70.9
2006	71.0	72.6	70.7

## “Shutup Innings”

OK, that’s not a very nice way to say it, but I was thinking about the opposite of a Shutdown Inning, which would be when a team answers their opponent’s scoring with some runs of their own.

While the list of the best and worst Shutdown Inning teams aligns fairly well with the best and worst teams overall, there’s randomness to the “Shutup Innings”. Again, it makes sense: some of the teams at the top of the list (Colorado, Boston) gave up a lot of runs and scored a lot of runs, so the chance that the innings in which they scored would have followed an inning in which they gave up some runs is high. However, some of the teams at the top, like the Pirates and Royals, were top teams overall. But what gives with the Rays? Is that an indicator of “clutch” performance, or just a random sample? The bottom of the list is filled with pretty much last year’s worst teams overall, with the exception of Texas, who really turned it on in the 2<sup>nd</sup> half after struggling for a while. For what it’s worth:

2015	Shutup Opps	Shutup Innings	Shutup%
PIT	344	113	32.8
TBA	337	108	32.0
COL	449	134	29.8
KCA	348	100	28.7
BOS	374	107	28.6
TOR	354	101	28.5
HOU	337	95	28.2
NYN	327	92	28.1
OAK	369	103	27.9
CLE	341	94	27.6
SFN	348	96	27.6
CHN	332	90	27.1
DET	399	107	26.8
WAS	341	91	26.7
MIL	391	104	26.6
SEA	379	101	26.6
<b>MLB</b>	<b>10961</b>	<b>2917</b>	<b>26.6</b>
BAL	377	100	26.5
ANA	363	96	26.4
ARI	376	98	26.1
CIN	403	101	25.1
CHA	364	91	25.0
NYA	377	94	24.9
SLN	293	73	24.9
LAN	324	80	24.7



MIN	361	88	24.4
<b>TEX</b>	<b>372</b>	<b>90</b>	<b>24.2</b>
<b>MIA</b>	<b>361</b>	<b>86</b>	<b>23.8</b>
<b>ATL</b>	<b>407</b>	<b>96</b>	<b>23.6</b>
<b>SDN</b>	<b>393</b>	<b>92</b>	<b>23.4</b>
<b>PHI</b>	<b>420</b>	<b>96</b>	<b>22.9</b>

By comparison, in 2014, the “Shutup Innings” top and bottom was a little more jumbled:

2014	Shutup Opps	Shutup Innings	Shutup%
<b>PIT</b>	<b>342</b>	<b>102</b>	<b>29.8</b>
<b>CLE</b>	<b>364</b>	<b>107</b>	<b>29.4</b>
<b>ANA</b>	<b>322</b>	<b>94</b>	<b>29.2</b>
<b>CHA</b>	<b>387</b>	<b>113</b>	<b>29.2</b>
<b>COL</b>	<b>421</b>	<b>123</b>	<b>29.2</b>
MIN	403	114	28.3
MIL	352	99	28.1
PHI	367	100	27.2
DET	337	91	27.0
SFN	325	85	26.2
CIN	341	89	26.1
TOR	356	93	26.1
MLB	10550	2707	25.7
NYA	366	93	25.4
BAL	340	86	25.3
HOU	392	99	25.3
TBA	308	77	25.0
ARI	393	98	24.9
MIA	343	85	24.8
NYN	342	84	24.6
OAK	325	80	24.6
SDN	334	79	23.7
BOS	385	91	23.6
SEA	301	71	23.6
TEX	387	91	23.5
LAN	334	78	23.4
<b>SLN</b>	<b>317</b>	<b>74</b>	<b>23.3</b>
<b>ATL</b>	<b>370</b>	<b>85</b>	<b>23.0</b>
<b>CHN</b>	<b>366</b>	<b>84</b>	<b>23.0</b>
<b>WAS</b>	<b>301</b>	<b>68</b>	<b>22.6</b>

<b>KCA</b>	<b>329</b>	<b>74</b>	<b>22.5</b>
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Here are the teams with the highest Shutup Inning% since 1900.

#### Highest Shutup Inning% Teams since 1900 (>=37%)

Year	Team	Shutup Opps	Shutup Innings	Shutup Inning%
1935	DET	324	130	40.1
1977	PHI	371	148	39.9
1934	DET	349	137	39.3
1953	BRO	345	135	39.1
1930	NYA	413	160	38.7
1927	NYA	311	119	38.3
1977	MIN	431	164	38.1
1994	CLE	291	110	37.8
1999	HOU	373	139	37.3
1941	NYA	341	127	37.2
1936	NYA	367	136	37.1
2000	CHA	403	149	37.0

#### Highest Shutup Inning% Teams since 1991 (>=35%)

Year	Team	Shutup Opps	Shutup Innings	Shutup Inning%
1994	CLE	291	110	37.8
1999	HOU	373	139	37.3
2000	CHA	403	149	37.0
1995	COL	388	143	36.9
1994	CHA	268	98	36.6
2000	NYA	400	146	36.5
2003	ATL	378	136	36.0
1993	PHI	393	141	35.9
1998	NYA	335	119	35.5
1994	DET	337	119	35.3
2000	CLE	405	143	35.3
1998	COL	431	151	35.0

## Conclusions

Based on the data, I don't see that, overall, pitchers are performing better or worse *than expected* in the "Shutdown Inning" situations. *When* your opponent score runs does not appear to be directly related to when *your* team scores runs: you either pitch well or you don't.

Are there teams that are better or worse than other teams? Sure, just like some teams have better pitching staffs than others, or better bullpens that can shut down teams late in the game. Most of time, teams perform pretty much the same in each of the different situations I came up with (All, Late, and Comeback). Plus, the number of Opportunities over the course of one season is fairly small, especially in the Late (125-175) and Comeback (175-200) situations.

The more runs being scored around the league, the harder it is to clamp down and get that shutdown inning. It makes sense: runs will be scored in more innings as offense jumps, as it did in the 1920s and 1930s, and 2000s. When runs are scarce, as in the mid-1960s, fewer innings will have runs scored in them.

While it definitely is a morale killer for the fans, I'd hesitate to say it has more of an effect on the outcome of the game than giving up runs in any other inning.

Bob Mecca

August 27<sup>th</sup>, 2015

Updated with 2015 Game Data, December 13<sup>th</sup>, 2015