



COMMONWEALTH OF  
PUERTO RICO

Government Development Bank  
for Puerto Rico

September 2015

# Economic Activity Index (“GDB-EAI”)

# Clarification about the interpretation of the GDB-EAI figures

The GDB-EAI is an indicator of the general economic activity, not a direct measurement of the real GNP. The annual growth rate of the EAI **is not** the same as the annual growth rate of the real GNP.

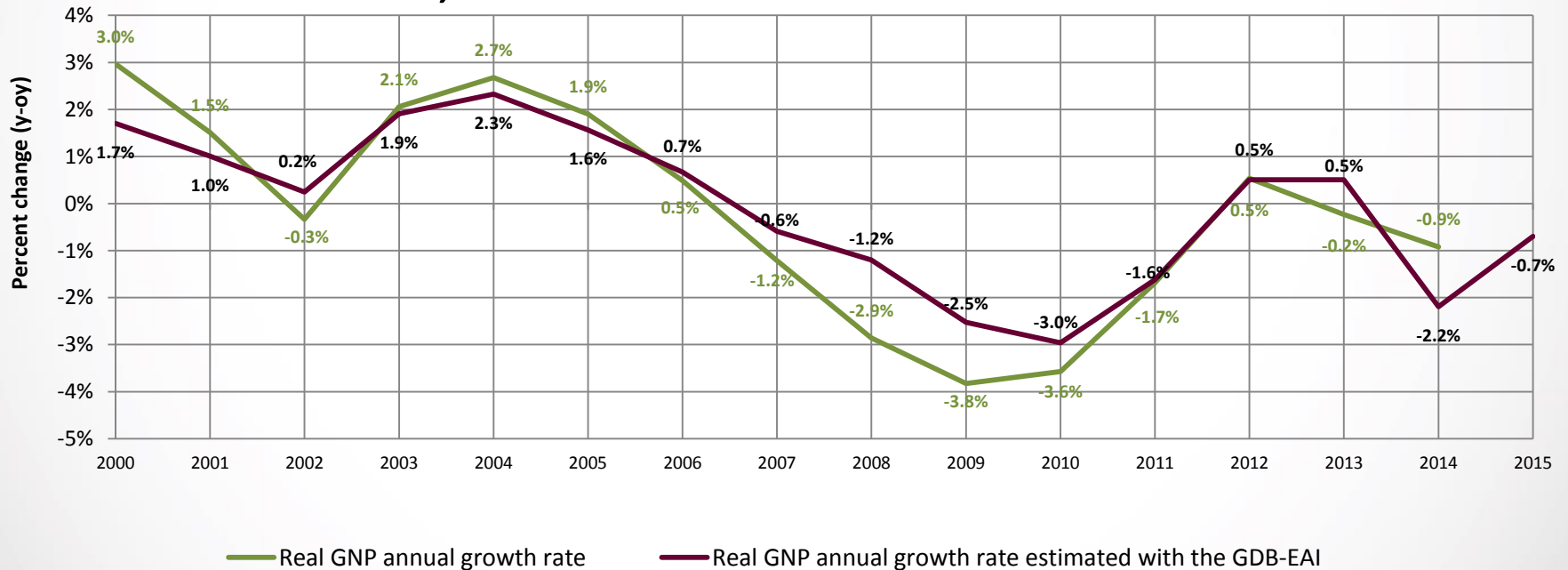
Fiscal Year	New GDB-EAI annual growth	Real GNP annual growth estimated using the new GDB-EAI	Actual real GNP annual growth
2002	-0.4%	0.2%	-0.3%
2003	1.7%	1.9%	2.1%
2004	2.2%	2.3%	2.7%
2005	1.3%	1.6%	1.9%
2006	0.1%	0.7%	0.5%
2007	-1.5%	-0.6%	-1.2%
2008	-2.3%	-1.2%	-2.9%
2009	-4.0%	-2.5%	-3.8%
2010	-4.5%	-3.0%	-3.6%
2011	-2.8%	-1.6%	-1.7%
2012	-0.1%	0.5%	0.5%
2013	-0.1%	0.5%	-0.2%
2014	-3.6%	-2.2%	-0.9%
2015	-1.5%	-0.7%	

- Nevertheless, notice that with some exceptions, the real GNP growth estimates coming from the new EAI are relatively close (although not identical) to the actual real GNP growth figures.
- The annual growth for FY2015 was estimated using the average of the twelve months of the index, and comparing it to the average value for FY2014.
- With FY2014 data of the new GDB-EAI, the real GNP growth estimate shows a larger reduction than the actual figures published by the Planning Board, while the estimates for FY2015 would reflect a decline of 0.7%.

# Clarification about the interpretation of the GDB-EAI figures (2)

Here is a comparison graph of the actual real GNP figures and the estimates of the annual growth of the real GNP using the figures coming from the GDB-EAI.

## Annual Growth Rate Comparisons: Real GNP, and real GNP estimated with the GDB-EAI



Real GNP data source: Puerto Rico Planning Board

# General Commentary - September 2015

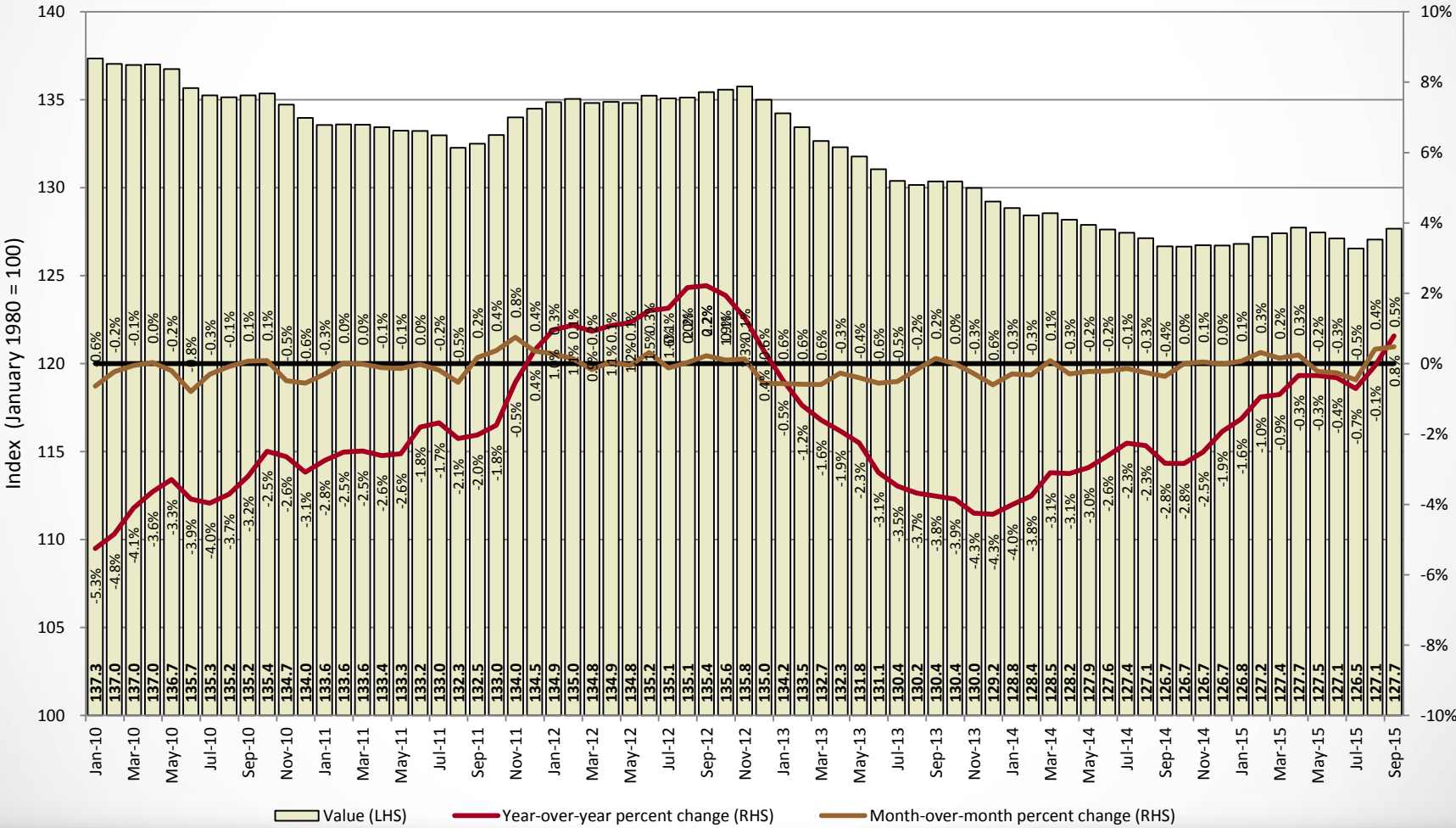
In September 2015, the GDB-EAI increased by 0.8% on a year-over-year (y-o-y) basis, and reflected a month-over-month (m-o-m) increase of 0.5%.

- The September 2015 figure for the EAI was 127.7, increase by 0.8 compared to September 2014, and increased by 0.5% compared to August 2015. On a year-to-date basis (July-September) the EAI was 127.1, remained flat compared with respect to the same period of the previous year.
- Total non-farm payroll employment for September 2015 averaged 904,300, an annual increase of 0.5%.
- The preliminary data for electric power generation for September 2015 was 1,812.7 million of kWh, an annual increase of 1.0%.
- The preliminary number for gasoline consumption\* in September 2015 was 84.6 million gallons, 4.6% above September 2014.
- Cement sales for September 2015 totaled 1.04 millions of bags, registering an annual decrease of 5.3%.

\* The monthly gasoline consumption is estimated by the GDB from the Treasury Department's monthly gasoline excise tax collections paid by importers which are transferred to P.R. Highways and Transportation Authority. These collections fluctuate due to changes in inventories and purchases, which do not necessarily reflect the actual monthly consumption reported by retailers.

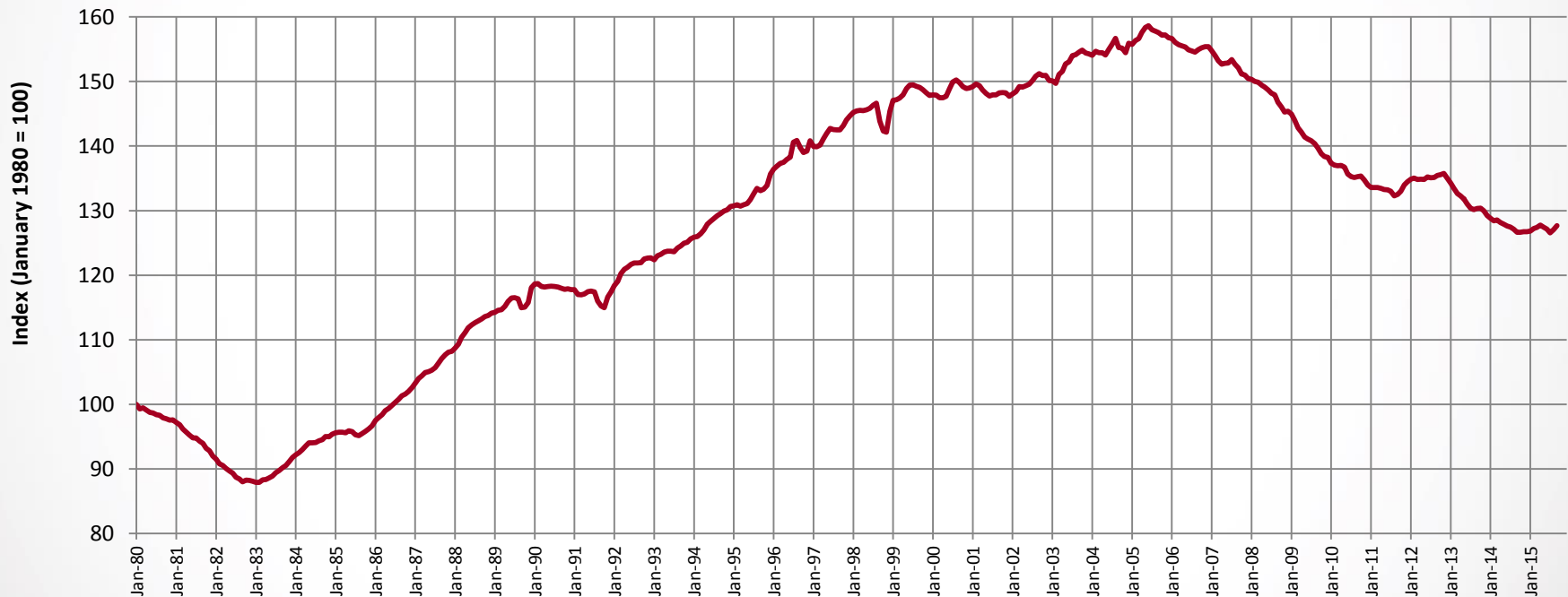
In September 2015, the GDB-EAI increased by 0.8% on a year-over-year (y-o-y) basis. On a month-over-month basis, the GDB-EAI increased by 0.5%.

## GDB Economic Activity Index



The complete series of the EAI, which starts in January 1980, shows the recessions of FY1982 and FY1983, the mild recession of FY1991, and the recession of 2001. It also shows the path of the Index since the beginning of the current recession.

## GDB Economic Activity Index



# GDB Economic Activity Index: Data for the past decade

PUERTO RICO ECONOMIC INDICATORS  
GDB Economic Activity Index  
(January 1980 = 100)

GOVERNMENT DEVELOPMENT BANK  
ECONOMIC ANALYSIS DIVISION

FISCAL YEAR *	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JULY	154.7	153.4	148.2	140.8	135.3	133.0	135.1	130.4	127.4	126.5
AUGUST	154.5	152.7	147.9	140.4	135.2	132.3	135.1	130.2	127.1	127.1
SEPTEMBER	155.0	152.1	146.8	139.7	135.2	132.5	135.4	130.4	126.7	127.7
OCTOBER	155.2	151.2	146.0	138.8	135.4	133.0	135.6	130.4	126.7	
NOVEMBER	155.4	151.0	145.3	138.4	134.7	134.0	135.8	130.0	126.7	
DECEMBER	155.4	150.5	145.4	138.2	134.0	134.5	135.0	129.2	126.7	
JANUARY	154.8	150.3	145.0	137.3	133.6	134.9	134.2	128.8	126.8	
FEBRUARY	154.0	150.0	144.0	137.0	133.6	135.0	133.5	128.4	127.2	
MARCH	153.2	149.9	142.8	137.0	133.6	134.8	132.7	128.5	127.4	
APRIL	152.7	149.5	142.2	137.0	133.4	134.9	132.3	128.2	127.7	
MAY	152.8	149.1	141.4	136.7	133.3	134.8	131.8	127.9	127.5	
JUNE	152.9	148.7	141.1	135.7	133.2	135.2	131.1	127.6	127.1	

## YEAR OVER YEAR PERCENTAGE CHANGE

FISCAL YEAR *	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JULY	-2.1	-0.9	-3.4	-5.0	-4.0	-1.7	1.6	-3.5	-2.3	-0.7
AUGUST	-2.1	-1.2	-3.1	-5.1	-3.7	-2.1	2.2	-3.7	-2.3	-0.1
SEPTEMBER	-1.7	-1.8	-3.5	-4.8	-3.2	-2.0	2.2	-3.8	-2.8	0.8
OCTOBER	-1.2	-2.6	-3.4	-4.9	-2.5	-1.7	1.9	-3.9	-2.8	
NOVEMBER	-1.2	-2.9	-3.8	-4.7	-2.6	-0.5	1.3	-4.2	-2.5	
DECEMBER	-0.9	-3.2	-3.4	-4.9	-3.1	0.4	0.4	-4.3	-1.9	
JANUARY	-1.2	-2.9	-3.6	-5.3	-2.7	1.0	-0.5	-4.0	-1.6	
FEBRUARY	-1.3	-2.6	-4.0	-4.8	-2.5	1.1	-1.2	-3.8	-0.9	
MARCH	-1.6	-2.2	-4.7	-4.1	-2.5	0.9	-1.6	-3.1	-0.9	
APRIL	-1.8	-2.1	-4.9	-3.6	-2.6	1.1	-1.9	-3.1	-0.3	
MAY	-1.6	-2.4	-5.2	-3.3	-2.6	1.2	-2.2	-3.0	-0.3	
JUNE	-1.3	-2.7	-5.1	-3.9	-1.8	1.5	-3.1	-2.6	-0.4	

## YEAR OVER YEAR DIFFERENCE

FISCAL YEAR *	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JULY	-3.3	-1.3	-5.2	-7.3	-5.6	-2.3	2.1	-4.7	-2.9	-0.9
AUGUST	-3.3	-1.9	-4.7	-7.6	-5.2	-2.9	2.9	-5.0	-3.0	-0.1
SEPTEMBER	-2.6	-2.9	-5.3	-7.1	-4.5	-2.7	2.9	-5.1	-3.7	1.0
OCTOBER	-1.9	-4.0	-5.1	-7.2	-3.5	-2.4	2.6	-5.2	-3.7	
NOVEMBER	-1.8	-4.4	-5.7	-6.9	-3.6	-0.7	1.8	-5.8	-3.3	
DECEMBER	-1.4	-4.9	-5.0	-7.2	-4.3	0.5	0.5	-5.8	-2.5	
JANUARY	-1.9	-4.4	-5.4	-7.6	-3.8	1.3	-0.6	-5.4	-2.0	
FEBRUARY	-2.0	-4.0	-6.0	-7.0	-3.4	1.5	-1.6	-5.0	-1.2	
MARCH	-2.5	-3.4	-7.0	-5.9	-3.4	1.2	-2.2	-4.1	-1.1	
APRIL	-2.8	-3.2	-7.3	-5.2	-3.6	1.4	-2.6	-4.1	-0.4	
MAY	-2.5	-3.7	-7.7	-4.6	-3.5	1.6	-3.0	-3.9	-0.4	
JUNE	-2.1	-4.2	-7.6	-5.4	-2.4	2.0	-4.2	-3.4	-0.5	

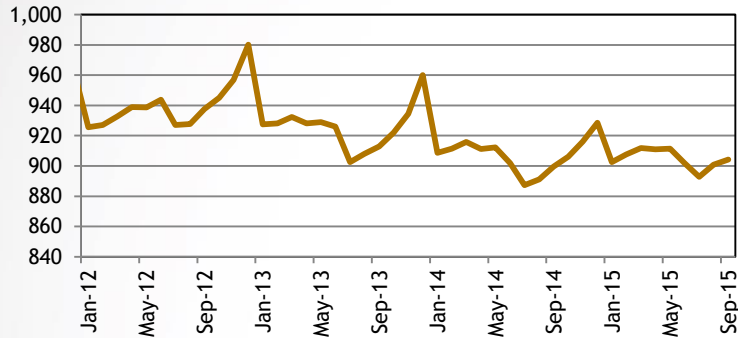
## SUMMARY DATA

FISCAL YEAR *	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>AVERAGE</b>	154.2	150.7	144.7	138.1	134.2	134.1	134.0	129.2	127.1	
<b>DIFFERENCE</b>	-2.3	-3.5	-6.0	-6.6	-3.9	-0.1	-0.1	-4.8	-2.1	
<b>% CHANGE</b>	-1.5	-2.3	-4.0	-4.5	-2.8	-0.1	-0.1	-3.6	-1.6	
<b>JUL-SEP</b>										
<b>AVERAGE</b>	154.7	152.7	147.6	140.3	135.2	132.6	135.2	130.3	127.1	127.1
<b>DIFFERENCE</b>	-3.1	-2.0	-5.1	-7.3	-5.1	-2.6	2.6	-4.9	-3.2	0.0
<b>% CHANGE</b>	-1.9	-1.3	-3.3	-5.0	-3.6	-1.9	2.0	-3.6	-2.5	0.0
<b>CALENDAR YEAR</b>										
<b>AVERAGE</b>	152.6	148.1	141.1	135.9	133.3	135.1	131.3	127.6		
<b>DIFFERENCE</b>	-2.8	-4.5	-7.0	-5.2	-2.5	1.8	-3.8	-3.8		
<b>% CHANGE</b>	-1.8	-3.0	-4.7	-3.7	-1.9	1.4	-2.8	-2.9		
<b>JAN-SEP</b>										
<b>AVERAGE</b>	153.2	148.9	141.9	136.3	133.2	135.0	131.8	127.9	127.2	
<b>DIFFERENCE</b>	-2.2	-4.2	-7.0	-5.7	-3.1	1.9	-3.2	-4.0	-0.6	
<b>% CHANGE</b>	-1.4	-2.8	-4.7	-4.0	-2.3	1.4	-2.4	-3.0	-0.5	

# GDB Economic Activity Index Components

## Total Non-Farm Payroll Employment\*

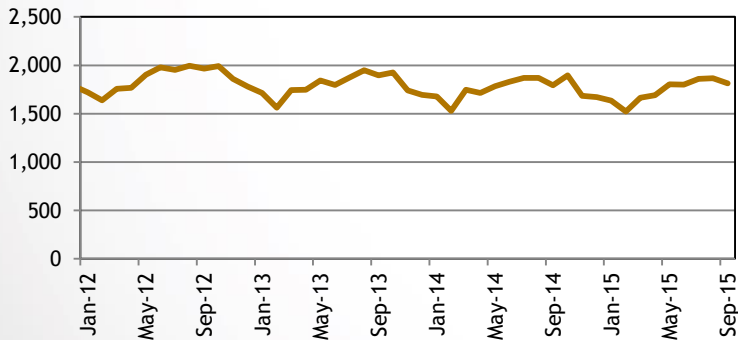
(Thousands of jobs)



- Total non-farm payroll employment for September 2015 averaged 904,300, an annual increase of 0.5%.

## Electric Power Generation\*

(Millions of kWh)



- The preliminary data for electric power generation for September 2015 averaged 1,812.7 million kWh, an annual increase of 1.0%.

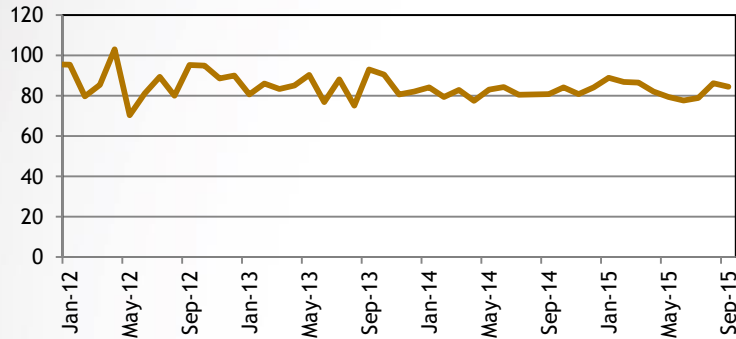
Sources: BLS and PREPA  
\* Not seasonally adjusted.



# GDB Economic Activity Index Components

## Gasoline Consumption\*

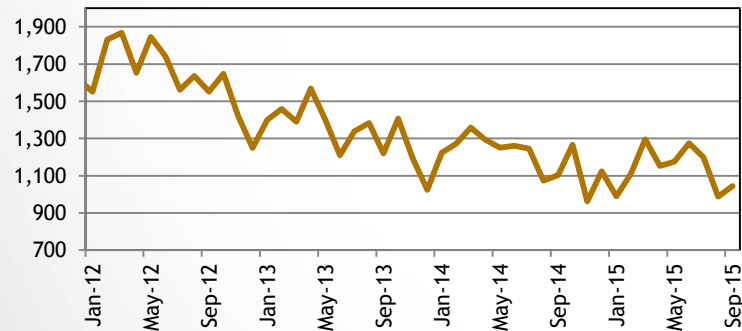
(Millions of gallons)



- The preliminary estimate of gasoline consumption for September 2015 was 84.6 million gallons, for an annual increase of 4.6%.

## Cement Sales\*

(Cement bags sold, in thousands)



- Cement Sales for September 2015 totaled 1.04 million of bags, an annual decrease of 5.3%.

\*The monthly gasoline consumption is estimated by the GDB from the Treasury Department's monthly gasoline excise tax collections paid by importers which are transferred to P.R. Highways and Transportation Authority.

Sources: PRHTA and GDB  
\* Not seasonally adjusted.

# **Description of the GDB-Economic Activity Index**

# GDB Economic Activity Index Highlights and Composition

## Advantages of the GDB-EAI:

- Readily available
- Highly correlated to Puerto Rico's real GNP
- Reliable tool to monitor actual trend of Puerto Rico economy
- Month-over-month comparisons are now more reliable

## The GDB-EAI is made up of 4 indicators:

- Total Payroll Employment (Establishment Survey/ Thousands of employees)
- Total Electric Power Generation (Millions of kWh)
- Cement Sales (Millions of bags)
- Gas Consumption (Millions of gallons)

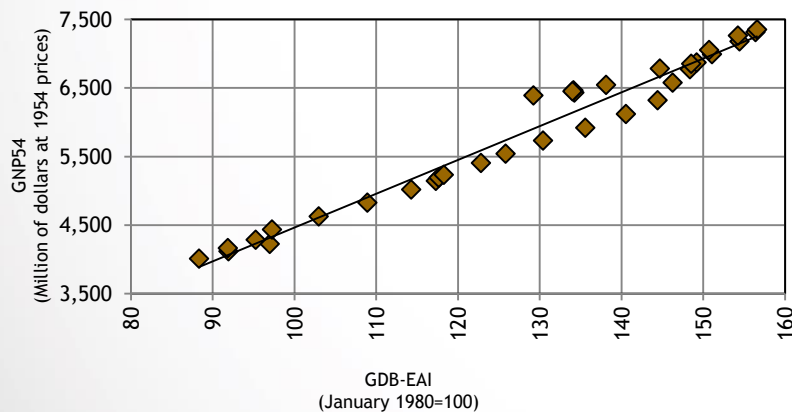
# Description of the GDB-EAI

- The GDB-EAI is a coincident index for the economic activity of Puerto Rico. It is highly correlated to Puerto Rico's real GNP not only on the levels, but also on the annual growth rates.
- This index was developed following the methodology similar to that used by The Conference Board in their coincident index. This methodology follows a standard procedure to adjust the data for seasonality and volatility factors.

## Real Gross National Product as a function of the GDB Economic Activity Index

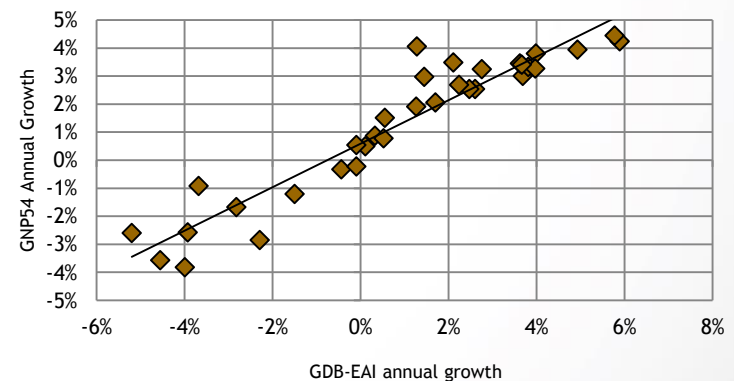
Relationship on the levels: FY1981-FY2014

$$y = 49.324x - 469.42 \quad R^2 = 0.9681$$



Relationship on the growth rates: FY1982-FY2014

$$y = 0.7789x + 0.0058 \quad R^2 = 0.8974$$



Sources: GDB

# Disclaimer

The GDB-EAI and its indicators are subject to revisions. While the information comprising the GDB EAI has been obtained from sources GDB believes to be reliable, GDB is not responsible for any errors or omissions, or for the results obtained from the use of this information.