

STATE ALLOCATION BOARD

707 Third Street
West Sacramento, California 95605
www.opsc.dgs.ca.gov



**Implementation Committee
Proposed Meeting Schedule for 2010**

Thursday, August 12, 2010

California State Capitol
Sacramento, California

Thursday, September 9, 2010

California State Capitol
Sacramento, California

Thursday, October 14, 2010

California State Capitol
Sacramento, California

Wednesday, November 10, 2010

California State Capitol
Sacramento, California

December 2010 – To Be Determined

California State Capitol
Sacramento, California

*Meetings are scheduled from 9:30 a.m. to 3:30 p.m. with a one hour lunch break.
Please check www.opsc.dgs.ca.gov for hearing room assignments as meeting times, dates, and locations are subject to change.*

STATE ALLOCATION BOARD
IMPLEMENTATION COMMITTEE MEETING
August 12, 2010

CONSTRUCTION COST INDEX

PURPOSE OF REPORT

To continue discussions on the annual adjustment to the School Facility Program (SFP) grant apportionments based on the change in the statewide Class B Construction Cost Index (CCI).

BACKGROUND

Staff was directed at the March, 2010 State Allocation Board (SAB) meeting to examine the various indices available and discuss at the Implementation Committee meeting. At the June 3, 2010 Implementation Committee meeting, Staff presented a report of the SFP new construction and modernization grant amounts that are adjusted annually to reflect a particular Class B CCI. Staff provided history of the SAB and Implementation Committee discussions regarding the CCI along with an updated report from the Construction Cost Indices published by Marshall and Swift (M&S), Lee Saylor Index (LSI), and Engineering News-Record (ENR) from 1999 to 2010.

Mary Wallers, President/CEO of Sierra West Group, the organization that compiles the data for the Lee Saylor Index (LSI), presented the Committee with the background of the LSI and some of the components involved in compiling a report on a monthly and quarterly basis.

At that time, the Committee and stakeholders asked that OPSC contact ENR and M&S to be given the opportunity to provide information and answer questions about their CCI at a future Implementation Committee meeting. ENR could not be in attendance but provided information on the methodologies used to create the Index, as shown in Attachment A. Representatives from M&S agreed to attend and to provide information on their published CCI.

DISCUSSION

Unlike the current SFP that provides school construction grants on a per pupil basis, the Lease Purchase Program (LPP) grant amounts were determined primarily on a square footage basis. Using DSA approved plans, the OPSC determined whether the building type was Class B or Class D for each building. A school construction project could have consisted entirely of one building class type or a combination of both. The grant amount was based primarily on the verified square footage of each building for each class type.

OPSC staff has provided the following answers to questions raised at the June 3rd Implementation Committee meeting:

What is the difference between Class B and Class D?

Class B refers to buildings made of reinforced concrete or steel frames, concrete floors, and roofs. Class D refers to structures that are constructed primarily of wood. The terms appear to have been developed for the purpose of classification in construction cost indices. Attachment B provides the M&S index changes for both classes from 1999 to 2010.

What index did the SAB use under the LPP?

The former Office of Local Assistance (OLA) used the adjustment factors from M&S since the mid-1960's. Over time, different index baselines were established providing that the adjustment factor could begin at 1.00 after periods of inflation. The baseline for the building class indices were re-established in September 1987. For ten years (1987 to 1996), LSI provided the Class D adjustment factor while M&S provided the Class B. During that time the OLA continued to record the M&S factors for both building classes and based upon this data the SAB proposed that the LSI and M&S Class D factors resulted in equal indices. The M&S index was more readily available on a monthly basis; therefore the SAB approved the use of M&S exclusively in September 1996.

Why is the Class B CCI used for SFP?

Senate Bill 50 (Greene) created the SFP in 1998 and required the SAB to use the annual percent change in the Class B index to adjust the pupil grant amounts provided for modernization and new construction projects.

Can the Board adjust the CCI more than once a year?

EC Section 17072.10(b) which states, "The Board shall annually adjust the per un-housed pupil apportionment to reflect construction cost changes, as set forth in the statewide cost index for class B Construction as determined by the Board." The board can only make this adjustment annually, to mean only once in a 12 month or 365 day period.

Do the indices incorporate prevailing wage rates?

Each company tracks the local union wages for each city surveyed for the index. A majority of local union wages make up the prevailing wage in most states. "Prevailing Wage" is defined by the Department of Industrial Relations (DIR) as the hourly wage, usual benefits and overtime, paid to the majority of workers, laborers, and mechanics within a particular area. California prevailing wage rate is established by the DIR for each trade and occupation based on surveys given in a given area for the predominant wages. According to the DIR, the majority of predominant wages are the union wages. For example, ENR has price reporters covering 20 U.S. cities that check prices locally. The prices are quoted from the same suppliers each month and ENR computes its latest indexes from these figures and local union wage rates.

Sierra West Group, representing LSI attended the June Implementation Committee Meeting. In order to address any remaining concerns as well as give the remaining major indices an opportunity to address the Implementation Committee, ENR and M&S were invited to attend today's meeting. ENR declined an invitation but directed the OPSC to information posted on their website as well as an article. This information is included as Attachment A. A representative from M&S agreed to attend, provide information and answer questions the Committee members may have regarding the M&S index.

AUTHORITY

New Construction

EC Section 17072.10(b) states, "The Board shall annually adjust the per-unhoused-pupil apportionment to reflect construction cost changes, as set forth in the statewide cost index for class B construction as determined by the Board."

SFP Regulations Section 1859.71 states, "The new construction per-unhoused-pupil grant amount, as provided by Education Code Section 17072.10(a), will be adjusted annually based on the change in the Class B Construction Cost Index as approved by the Board each January."

Modernization

EC Section 17074.10(b) states, "The Board shall annually adjust the factors set forth in subdivision (a) according to the adjustment for inflation set forth in the statewide cost index for class B construction, as determined by the board."

SFP Regulation Section 1859.78 states, "The modernization per-unhoused-pupil grant amount, as provided by Education Code Section 17074.10(a), will be adjusted annually based on the change in the Class B Construction Cost Index as approved by the Board each January."

SFP Regulation Section 1859.2 defines "Class B Construction Cost Index" as a construction factor index for structures made of reinforced concrete or steel frames, concrete floors, and roofs, and accepted and used by the Board.

Using ENR Indexes

Readers of ENR direct a steady stream of questions about the magazine's indexes and how to accurately apply them to various construction projects. To help clarify the nature and uses of the cost indexes, here are answers to the most frequently asked questions and suggestions on how to avoid costly mistakes.

What is the difference between ENR's Construction Cost Index and its Building Cost Index?

The difference is in their labor component. The CCI uses 200 hours of common labor, multiplied by the 20-city average rate for wages and fringe benefits. The BCI uses 68.38 hours of skilled labor, multiplied by the 20-city wage-fringe average for three trades—bricklayers, carpenters and structural ironworkers. For their materials component, both indexes use 25 cwt of fabricated standard structural steel at the 20-city average price, 1.128 tons of bulk portland cement priced locally and 1,088 board ft of 2x4 lumber priced locally. The ENR indexes measure how much it costs to purchase this hypothetical package of goods compared to what it was in the base year.

What kinds of construction do the ENR indexes represent?

The two indexes apply to general construction costs. The CCI can be used where labor costs are a high proportion of total costs. The BCI is more applicable for structures.

Where does ENR get its data?

ENR has price reporters covering 20 U.S. cities who check prices locally. The prices are quoted from the same suppliers each month. ENR computes its latest indexes from these figures and local union wage rates.

Does ENR have cost indexes for cities outside the U.S.?

ENR publishes indexes for two Canadian cities, Montreal and Toronto, each month. ENR's Fourth Quarterly Cost Report includes the most comprehensive listing of international costs.

Are material prices averaged?

No. ENR reporters collect "spot prices" from a single source for all of the materials tracked, including those in the index. The reporters survey the same suppliers each month for materials that affect the index. Actual prices within a city may vary depending on the competitiveness of the market and local discounting practices. This method allows for a quick indicator of price movement, which is its primary objective.

Do the city indexes have different weightings?

No. Each city uses the same weight for the labor and materials components as the U.S. average index.

Do the indexes measure cost differentials between cities?

No. This is one of the more common errors in the application of ENR's indexes, which only measure the trend in an individual city and in the U.S. as a whole. Differentials between cities may reflect differences in labor productivity and building codes. Moreover, quoting bases for lumber and cement vary from one city to another. One city may report list prices while in another prices for the same material may include discounts.

Are indexes seasonally adjusted?

No. This is an important point for users of the indexes to keep in mind. Wages, the most important component, usually affect the indexes once or twice a year. Cement prices tend to be more active in the spring while fabricated structural steel pricing tends to have monthly adjustments. Lumber prices, more dependent on local pricing and production conditions, are the most volatile and can change appreciably from month to month. Declines in indexes are most often the result of falling lumber prices.

The study of an index movement for a period of less than 12 months can sometimes miss these important developments. Users of an index for individual cities should also watch the timing of wage settlements. Stalled labor negotiations may keep the old wage rate in effect longer than a 12-month period, giving the appearance of a low inflation rate.

Is it more accurate to use an index that is closest to my home city?

No. The 20-city average index is generally more appropriate. Because it has more elements, it has a smoother trend. Indexes for individual cities are more susceptible to price spikes.

Are annual averages weighted?

No. They are straight mathematical averages.

Are the indexes verifiable?

Yes. ENR's national indexes are updated in the first week of each month on the Construction Economics pages of the magazine while indexes for individual cities appear in the second issue of the month. Prices for the indexes' materials component are published in the preceding month on the Construction Economics pages.

Cement prices are in the first issue of the month, lumber prices in the third and steel in the fourth issue. Wage rates for all 20 cities are published in the second and third Quarterly Cost Reports. The reader can compute ENR's indexes by multiplying the published prices and wages by the appropriate weights, shown in the tables below, and summing the results.

Does ENR forecast its indexes?

Yes. ENR projects its BCI and CCI for the next 12 months once a year in the Fourth Quarterly Cost Report. To reach its forecast, ENR incorporates the new wage rates called for in multiyear, collective-bargaining agreements and estimates for areas where new contract terms will be negotiated. ENR estimates the materials component by studying

ATTACHMENT A

consumption forecasts and price trends.

Does ENR ever change the weighting of the index components?

No. The components are always multiplied by the same factors. However, a component's share of an index's total will shift with its relative escalation rate.

Has ENR ever changed the makeup of the index components?

Yes. Only once, in 1996. ENR was forced to switch from the mill price for structural steel to the 20-city average fabricated price for channel beams, I-beams and wide-flanges when ENR's sources for mill prices left the structural market.

Does ENR revise the indexes?

Yes. On some occasions, ENR must revise the indexes. For example, last year ENR revised its March 2004 indexes shortly after their initial publication to reflect the huge surcharges being placed on structural steel. Revisions to national indexes are published below. Revisions to indexes for individual cities are published in the tables on the following pages.

Do ENR's cost indexes capture all the factors influencing construction costs?

No. ENR's two primary cost indexes, the Construction Cost Index and the Building Cost Index, each have only four components (inputs) -- cement, lumber, structural steel, and labor. They do not capture all the factors influencing project costs. They merely offer a snapshot of general cost trends.

Why doesn't ENR publish data on construction costs in Florida or Arizona?

When we first began collecting cost data in the 1930's Florida and Arizona were very lightly populated. We have decided not to revise our list of 20 cities, in order to preserve the continuity of our data sets.

Where can I obtain data on construction costs in Florida or Arizona, or other states that ENR does not collect cost data from?

There are three major firms that collect construction cost data -- R.S. Means, Marshall and Swift/Boeckh, and BNI Books -- all of which have data for most regions of the U.S., including Florida and Arizona.

What data does ENR publish on building material prices?

ENR has been collecting, compiling and publishing price data on 75 different building materials, in 20 major U.S. cities, plus Montreal and Toronto, on a monthly basis for over 50 years. We publish a table of cement and concrete and aggregate prices in our first weekly issue every month, pipe prices the second week, lumber, drywall and insulation prices the third week, and steel prices the fourth week.

How can I get any of this building material price data going back in time?

If you only need this data for a few specific months in the past, the best way to get it is to get those tables off our website. The monthly tables since February 2005 are posted on our website. To find them, go to our home page, and on the right-hand side of the screen, click on the link that says "magazine archive." Then scroll down to the weekly issue containing the table you need, and click on the link that says "This week ENR (date) online index." That will bring you to the table of contents page for that issue. Then, under the Departments heading, click on the Construction Economics link.

But if you need cost data for more than a few previous months, or data prior to February 2005, then you need to order data sets. Here is how to do that:

We have not posted historical data sets of our various building material tables on our website, for two reasons. One reason is that the demand is not that frequent, and the other reason is that we do not have the manpower to format all that data. However, we do sell data sets.

Once you have identified which specific building materials you want data sets for, call ENR circulation manager Brian McGann, phone: 609-426-5825, and place your order. We charge \$25 per product per year (for example, portland cement type one prices are \$25 per year). We have data available from 1992 to the present.

Once you have ordered and paid, Brian will notify our economics editor, Tim Grogan, who will download the data from his computer, and mail it to you in tabular form. It is not available in Excel format, because it is stored in a database that runs on an ancient computer program that is not compatible with current programs.

What you will receive, in tabular form, are the prices for the particular item, in each of the 20 cities that we collect data from, for 12 months (240 data points in all per year), plus the 20-city average price each month, plus the prices in Montreal and Toronto.

This process of providing data sets takes several days, as Tim's primary responsibility for ENR is to supervise our economics coverage. He can only pull these data sets on days when he is not closing stories.

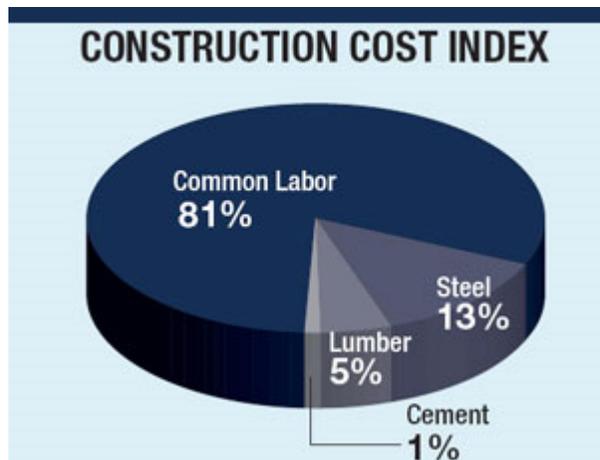
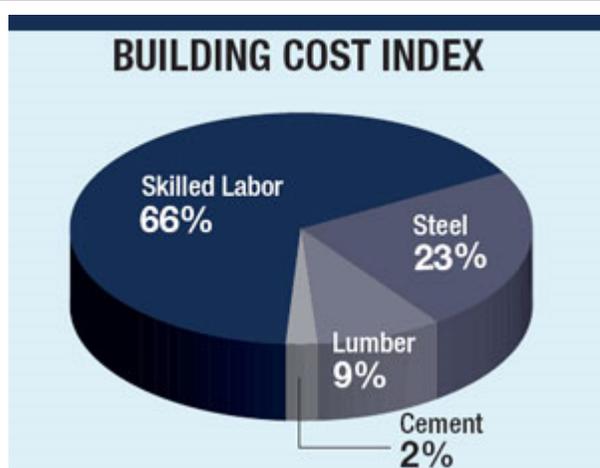
If you have any further questions, please call Scott Lewis, phone: 212-904-3507.

As Steel Spikes and Lumber Falls, What Is the Impact on Inflation?

03/24/2010

By [Tim Grogan](#)

Although ENR's cost indexes measure the costs of non-residential buildings, the downturn in the housing market still had a major impact on index movement. During this quarter, lumber prices in the indexes slipped another 0.8% after dropping 27% over the previous five years. Falling lumber prices had been offset by surging steel prices in 2008. However, steel prices were rolled back in 2009 and are just now firming, but with an uncertain future.



Source: ENR Construction Economics Dept.

As a result, the Building Cost Index (BCI) rose 0.8% this quarter, but the year-to-year escalation in March was just 0.9%, down from 7.3% in 2008 and 4.3% in 2009. The Construction Cost Index (CCI) is less affected by these swings in prices.

The mechanics of what drives ENR's indexes are explained below.

ENR began systematically reporting materials prices and wages in 1909, but it did not establish the CCI until 1921. The index was designed as a general-purpose tool to chart basic cost trends. It remains today as a weighted aggregate index of the prices of a constant quantity of structural steel, portland cement, lumber and common labor. This package of goods was valued at \$100, using 1913 prices.

The original use of common labor in the CCI was intended to reflect wage-rate activity for all construction workers. In the 1930s, however, wage and fringe-benefit rates climbed much faster in percentage terms for common laborers than for skilled tradesmen. In response to this trend, ENR in 1938 introduced its Building Cost Index to weigh the impact of skilled-labor trades on costs.

The BCI labor component is the average union wage rate, plus fringes, for carpenters, bricklayers and ironworkers. The materials component is the same as the CCI. The BCI also

represents a hypothetical package of these construction items, valued at \$100 in 1913.

Both indexes are designed to indicate basic underlying trends of construction costs in the U.S. Therefore, components are based on construction materials less influenced by local conditions. ENR chose steel, lumber and cement because they have a stable relationship to the nation's economy as well as playing a predominant role in construction.

As a practical matter, ENR selected these materials because reliable price quotations are promptly available for all three, ensuring the index can be computed swiftly and on a timely basis. While there may be some weaknesses in any index based on a limited number of components, ENR thinks a larger number of elements would increase the time lag between verifying prices and releasing the index. Also, an index made up of fewer components is more sensitive to price changes than one made up of

ATTACHMENT A

many.

On the downside, the use of just a few cost components makes indexes for individual cities more vulnerable to source changes. These aberrations tend to average out for the 20-city indexes.

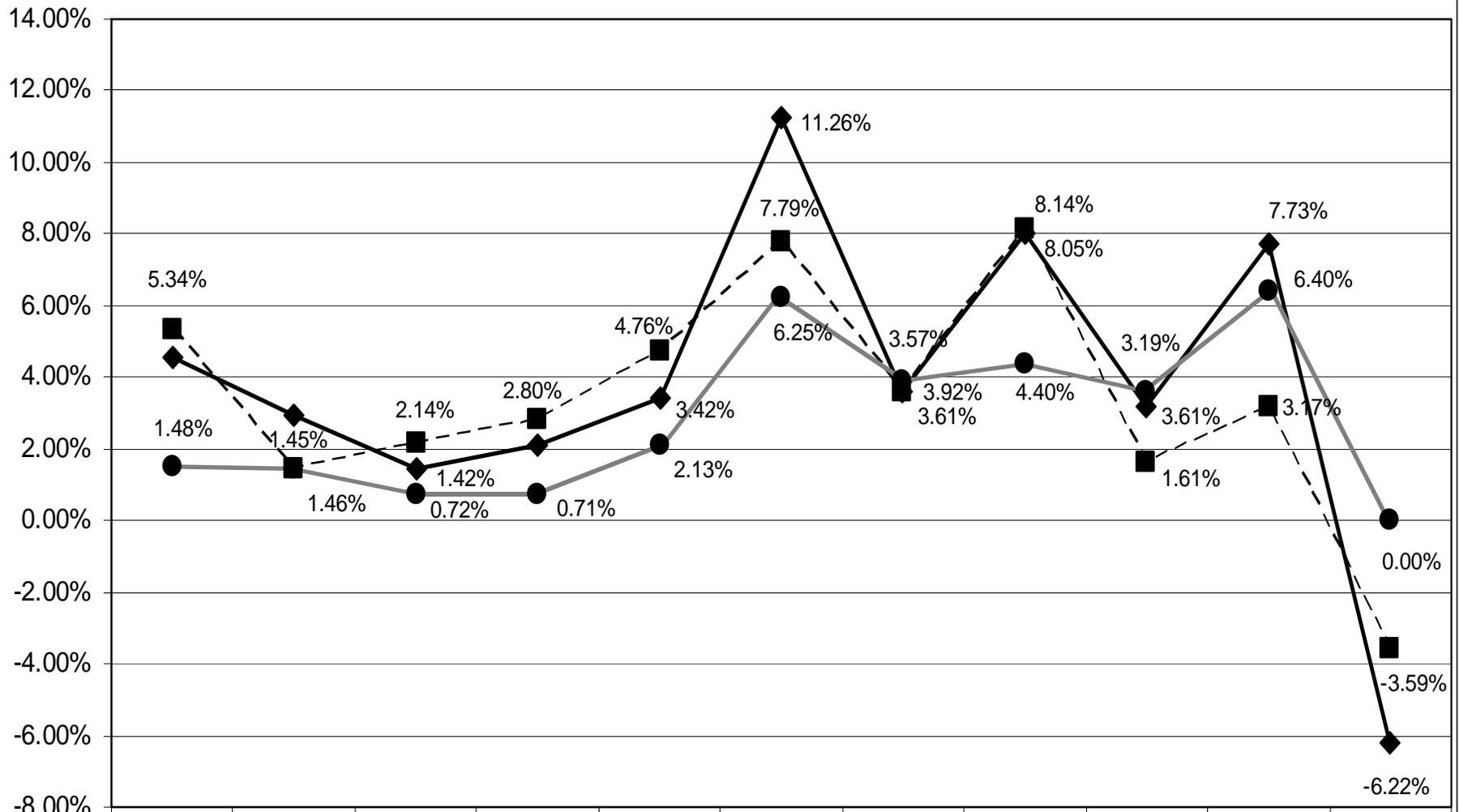
Since the indexes are computed with real prices, the proportion a given component has in the index will vary with its relative escalation rate. In the late 1970s, labor's share of the index dropped because materials prices were in the grip of hyperinflation. For example, in 1979, lumber prices increased 16%, cement prices increased 13%, and steel prices jumped 11%, but common and skilled labor rose 8%. These events resulted in materials gaining a larger percentage of the index.

In the original CCI, the components were weighted at 38% for labor, 38% for steel, 17% for lumber and 7% for portland cement. The shifting tide of inflation changed the weight of the CCI components to 81% for labor, 13% for steel, 5% for lumber and 1% for cement. This shift was less dramatic for the BCI, which is now 66% for labor, 23% for steel, 9% for lumber and 2% for cement.

Neither index is adjusted for productivity, managerial efficiency, labor-market conditions, contractor overhead and profit, or other less tangible cost factors. However, the indexes can be used to get a fix on these factors.

During times when productivity is low, the selling price will be relatively higher than the ENR index. At the other extreme, when competition is sharp—such as in a recession—the selling price of finished construction will generally fall below ENR's indexes.

ATTACHMENT B
M&S Construction Cost Index
Class B, Class D, F & E
1999 to 2010



◆— Class B	4.58%	2.92%	1.42%	2.10%	3.42%	11.26%	3.57%	8.05%	3.19%	7.73%	-6.22%
■- - Class D	5.34%	1.45%	2.14%	2.80%	4.76%	7.79%	3.61%	8.14%	1.61%	3.17%	-3.59%
●— F & E	1.48%	1.46%	0.72%	0.71%	2.13%	6.25%	3.92%	4.40%	3.61%	6.40%	0.00%