

Understanding and Using Fact Queries

The *facts.jq* resource is a very powerful tool for extracting financial information from SEC XBRL financial filings. This document provides a primer for using this resource. First, we want to outline the big picture view of the *facts.jq* resource and then provide a series of examples which helps a user understand and make use of this tool to do dimensional-type queries.

The first thing to understand is that the format of the query result of the *facts.jq* resource, the *facttable-for-component.jq*, and the *facttable-for-report.jq* are exactly the same fact table format. That format follows the spirit of the XBRL Abstract Model 2.0. For developers, this means that one interface can be created for all queries which return a set of reported facts. For business users, this makes working with these queries easier.

Visually, the fact table you work with looks like the following:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	us-gaap:StatementBusinessSegmentsAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	us-gaap:SegmentDomain	Q1	2012	2320164000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:CommercialBankingMember	Q1	2012	161741000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:CardServicesAndAutoMember	Q1	2012	199579000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:RetailFinancialServicesMember	Q1	2012	269442000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:InvestmentBankMember	Q1	2012	812959000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:CorporatePrivateEquityMember	Q1	2012	713326000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:TreasuryAndSecuritiesServicesMember	Q1	2012	667320000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	us-gaap:AssetManagementMember	Q1	2012	963850000000	iso4217:USD	-6

Each row in the table above is a reported fact. The aspects of a reported fact are provided which are shown in blue columns above. The fact value is provided, shown in darker green column. And finally if the fact is numeric, the additional properties “units” and “decimals” are provided, shown in light green columns.

The JSON, XML, CSV, and Excel format of each fact follows the above pattern. Below the XML version of a fact table which contains one reported fact is shown:

```

- <FactTable TableName="xbrl:Facts" NetworkIdentifier="http://bizql.io/facts">
  - <Fact>
    - <Aspects>
      - <Aspect>
        <Name>xbrl:Concept</Name>
        <Value>us-gaap:Assets</Value>
      </Aspect>
      - <Aspect>
        <Name>xbrl:Entity</Name>
        <Value>http://www.sec.gov/CIK 0000019617</Value>
      </Aspect>
      - <Aspect>
        <Name>xbrl:Period</Name>
        <Value>2012-03-31</Value>
      </Aspect>
      - <Aspect>
        <Name>dei:LegalEntityAxis</Name>
        <Value>sec:DefaultLegalEntity</Value>
      </Aspect>
      - <Aspect>
        <Name>us-gaap:StatementBusinessSegmentsAxis</Name>
        <Value>us-gaap:SegmentDomain</Value>
      </Aspect>
      - <Aspect>
        <Name>bizql:FiscalPeriod</Name>
        <Value>Q1</Value>
      </Aspect>
      - <Aspect>
        <Name>bizql:FiscalYear</Name>
        <Value>2012</Value>
      </Aspect>
    </Aspects>
    <Value>2320164000000</Value>
    <Type>NumericValue</Type>
    <Unit>iso4217:USD</Unit>
    <Decimals>-6</Decimals>
    <EntityRegistrantName>JPMORGAN CHASE & CO</EntityRegistrantName>
  </Fact>
</FactTable>

```

Second, when queries are constructed, the creator of the query can specify which aspects they want to work with and even add aspects to reported facts to overcome inconsistencies in SEC XBRL financial filings. For example, SEC XBRL financial filings can explicitly provide or not provide a legal entity axis, “dei:LegalEntityAxis”. However, the SEC Edgar Filer Manual (EFM) states that a legal entity can always be assumed. And therefore to compare reported fact across reports which inconsistently provide or do not provide this axis; the query can be adjusted to fit the needs of the user. To better understand this feature, a number of examples are provided in the next section.

Third, great care was taken to provide terminology and organization of information which is consistent with a business report model inspired by the XBRL Abstract Model 2.0. Further, additional metadata beyond what is provided by the actual filing or the SEC is provided and can be leveraged. None of this changes the meaning of reported information; it only makes querying information easier.

Finally, the parameters allowed by the facts query and additional examples of this query are documented in the API documentation and can be found here: <https://app.secdbrl.info/api>

Retrieve Facts

POST /facts.jq

Retrieve one or more facts for a combination of entity and concept.

Request Parameters

Type	Name	Value	Description
	format	json csv xml excel	The result format
	cik		The CIK of the entity
	ticker		The ticker of the entity
	tag	DOW30 SP500 FORTUNE100 FJI	The tag to filter entities
	sic		The industry group
	fiscalYear	year (e.g. 2011) LATEST ALL	The fiscal year of the fact to retrieve (default: LATEST)
	concept*		The name of the concept to retrieve the fact for
	fiscalPeriod	Q1 Q2 Q3 FY ALL	The fiscal period of the fact to retrieve (default: FY)
	map	FundamentalAccountingConcepts ?	The concept map that should be used to resolve the concept (default: none)

Understanding Dimensions or Aspects

This section provides a brief overview of working with dimensions or the aspects of a reported fact.

Example: Querying for the concept Assets

SEC Filing Page: <http://www.sec.gov/Archives/edgar/data/19617/000001961712000213/0000019617-12-000213-index.htm>

XBRL Cloud Viewer: <https://edgardashboard.xbrlcloud.com/flex/viewer/XBRLViewer.html#table=us-gaap%3AStatementTable&instance=http%3A%2F%2Fwww.sec.gov%2FArchives%2Fedgar%2Fdata%2F19617%2F000001961712000213%2Fjpm-20120331.xml&network=http%3A%2F%2Fwww.jporganchase.com%2Frole%2FConsolidatedBalanceSheetsUnaudited>

Balance sheet:

Reporting Entity [Axis]	0000019617 (http://www.sec.gov/CIK)			
Statement (Line Items)	Period [Axis]			
	2012-03-31		2011-12-31	
	Legal Entity [Axis]		Legal Entity [Axis]	
	Variable Interest Entity, Primary Beneficiary (Member)	Entity (Domain)	Variable Interest Entity, Primary Beneficiary (Member)	Entity (Domain)
Assets				
Cash and due from banks		55,383,000,000		59,602,000,000
Deposits with banks		115,028,000,000		85,279,000,000
Federal funds sold and securities purchased under resale agreements (included \$26,259 and \$24,891 at fair value)		240,484,000,000		235,314,000,000
Securities borrowed (included \$12,519 and \$15,308 at fair value)		135,650,000,000		142,462,000,000
Trading assets (included assets pledged of \$106,594 and \$89,856)	14,783,000,000 ³	456,000,000,000	12,079,000,000 ³	443,963,000,000
Securities (included \$381,731 and \$364,781 at fair value and assets pledged of \$92,498 and \$94,691)		381,742,000,000		364,793,000,000
Loans (included \$2,288 and \$2,097 at fair value)	81,032,000,000 ³	720,967,000,000	86,754,000,000 ³	723,720,000,000
Allowance for loan losses		(25,871,000,000)		(27,609,000,000)
Loans, net of allowance for loan losses		695,096,000,000		696,111,000,000
Accrued interest and accounts receivable		64,833,000,000		61,478,000,000
Premises and equipment		14,213,000,000		14,041,000,000
Goodwill		48,208,000,000		48,188,000,000
Mortgage servicing rights		8,038,000,000		7,223,000,000
Other intangible assets		3,029,000,000		3,207,000,000
Other assets (included \$17,121 and \$16,499 at fair value and assets pledged of \$1,206 and \$1,316)		2,269,000,000 ³		2,638,000,000 ³
Total assets		2,320,330,000,000		2,265,792,000,000
Liabilities				

Business segments:

Reporting Entity [Axis]	0000019617 (http://www.sec.gov/CIK)									
Statement, Scenario [Axis]	Scenario, Unspecified [Domain]									
Adjustments for Change in Accounting Principle [Axis]	Adjustments for Change in Accounting Principle [Domain]									
Business Acquisition [Axis]	Business Acquisition, Acquiree [Domain]									
Financing Receivable, Recorded Investment, by Class of Financing Receivable [Axis]	Financing Receivable, Recorded Investment, Class of Financing Receivable [Domain]									
Range [Axis]	Range [Domain]									
Segment Reporting Information (Line Items)	2012-01-01 - 2012-03-31									
	Statement, Business Segments [Axis]									
Income / (loss) before extraordinary gain	Investment Bank (Member)	Retail Financial Services (Member)	Card Services And Auto (Member)	Commercial Banking (Member)	Treasury And Securities Service...	Asset Management (Member)	Corporate Private Equity (Member)	Significant Reconciling Items...	Segment (Domain)	
Extraordinary gain										
Net income/(loss)	1,682,000,000	1,753,000,000	1,183,000,000	591,000,000	351,000,000	386,000,000	(563,000,000)	0	5,383,000,000	
Average common equity	40,000,000,000	26,500,000,000	16,500,000,000	9,500,000,000	7,500,000,000	7,000,000,000	70,711,000,000	0	177,711,000,000	
Total assets	812,959,000,000	269,442,000,000	199,579,000,000	161,741,000,000	66,732,000,000	96,385,000,000	713,492,000,000		2,320,330,000,000	
Return on average common equity	0.17	0.27	0.29	0.25	0.19	0.22			0.12	
Overhead ratio	0.65	0.65	0.43	0.36	0.73	0.72			0.69	

Query 1: Basic query of assets, assumes you want the root economic entity

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for the *root economic entity*

Query:

http://secxbrl.xbrl.io/v1/_queries/public/api/facts.jq?_method=POST&format=xml&concept=us-gaap:Assets&cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	bizq:FiscalPeriod	bizq:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	Q1	2012	2320164000000	iso4217:USD	-6

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012”. Note that the “dei:LegalEntityAxis” with the member “sec:DefaultLegalEntity” is also returned with fact table. The legal entity is always assumed to be the default legal entity if the legal entity is not explicitly provided.

Note that “dei:EntityDomain” or consolidated entity is always the root economic entity and therefore equivalent to “sec:DefaultLegalEntity”. However, if the default legal entity could be specified as “us-gaap:ParentCompany”. If so, that would be equivalent to “sec:DefaultLegalEntity”. Basically, “sec:DefaultLegalEntity” allows for cross entity comparison should different reporting entities provide different members for the root economic entity. A financial report always has one reporting entity which is identified by the CIK number in the entity context and one root economic entity identified by the legal entity, which could be explicitly provided or implied per SEC EFM rules, but is always understood to be the default legal entity.

Query 1a: Basic query of assets, assumes you want the root economic entity

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for the *root economic entity*, the root economic entity is explicitly specified.

Query:

http://secxbrl.xbrl.io/v1/_queries/public/api/facts.jq?_method=POST&format=xml&concept=us-gaap:Assets&dei:LegalEntityAxis=sec:DefaultLegalEntity&dei:LegalEntityAxis::default=sec:DefaultLegalEntity&cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	sec:DefaultLegalEntity	Q1	2012	2320164000000	iso4217:USD	-6

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012”. The legal entity is always assumed to be the default legal entity if the legal entity is not explicitly provided. In this case the legal entity is explicitly added to the fact table returned. Thus you see “dei:LegalEntityAxis” with the member “sec:DefaultLegalEntity” whether the legal entity axis is explicitly provided or implied, as specified by the SEC Edgar Filer Manual (EFM).

Query 2: Basic query of assets, ALL legal entities

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for *all legal entities*.

Query:

<http://secxbrl.xbrl.io/v1/queries/public/api/facts.iq?method=POST&format=xml&concept=us-gaap:Assets&dei:LegalEntityAxis=ALL&cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012>

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	dei:EntityDomain	Q1	2012	2320164000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	us-gaap:VariableInterestEntityPrimaryBeneficiaryMember	Q1	2012	98084000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK 0000019617	2012-03-31	jpm.NonconsolidatedPrivateLabelReSecurizationsMember	Q1	2012	3700000000	iso4217:USD	-8

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012” for all legal entities.

Query 2a: Basic query of assets, ALL legal entities

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for *all legal entities*. However, this query forces the dimension-default to a specific value in essence overriding that value. This is useful in cross report queries.

Query:

<http://secxbrl.xbrl.io/v1/queries/public/api/facts.jq?method=POST&format=xml&concept=us-gaap:Assets&dei:LegalEntityAxis=ALL&dei:LegalEntityAxis::default=sec:DefaultLegalEntity&cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012>

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK/0000019617	2012-03-31	us-gaap:VariableInterestEntityPrimaryBeneficiaryMember	Q1	2012	98084000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK/0000019617	2012-03-31	sec:DefaultLegalEntity	Q1	2012	2320164000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/CIK/0000019617	2012-03-31	jpm:NonconsolidatedPrivateLabelReSecurizationsMember	Q1	2012	3700000000	iso4217:USD	-8

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012” for all legal entities.

Query 3: Basic query of assets, specific legal entity (query explicitly specifies which member)

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for *one member which is specified in the query*.

Query:

<http://secxbrl.xbrl.io/v1/queries/public/api/facts.jq?method=POST&format=xml&concept=us-gaap:Assets&dei:LegalEntityAxis=us-gaap:VariableInterestEntityPrimaryBeneficiaryMember&cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012>

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK/0000019617	2012-03-31	us-gaap:VariableInterestEntityPrimaryBeneficiaryMember	Q1	2012	98084000000	iso4217:USD	-6

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012” for the legal entity “us-gaap:VariableInterestEntityPrimaryBeneficiaryMember”.

Query 4: Basic query of assets, if business segment axis does not exist add it to the fact

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for the default legal entity and if the fact does not have the legal entity axis, add the legal entity axis and set the value of that axis to the default legal entity; in addition, the business segment aspect which represents the total of all business segments should also be returned.

Query:

<http://secxbrl.xbrl.io/v1/queries/public/api/facts.jq?method=POST&format=xml&concept=us-gaap:Assets&dei:LegalEntityAxis=sec:DefaultLegalEntity&dei:LegalEntityAxis::default=sec:DefaultLegalEntity&us-gaap:StatementBusinessSegmentsAxis=us-gaap:SegmentDomain&us-gaap:StatementBusinessSegmentsAxis::default=us-gaap:SegmentDomain&cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012>

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	us-gaap:StatementBusinessSegmentsAxis	bizq:FiscalPeriod	bizq:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/CIK/0000019617	2012-03-31	sec:DefaultLegalEntity	us-gaap:SegmentDomain	Q1	2012	2320164000000	iso4217:USD	-6

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012”. The legal entity which is the default legal entity is to be provided with the returned fact table whether that axis is or is not explicitly provided in the reported fact table, thus you see “dei:LegalEntityAxis” with the member “sec:DefaultLegalEntity”. In addition, the business segment axis is to be provided with the member “us-gaap:SegmentDomain” whether the “us-gaap:StatementBusinessSegmentAxis” exists on the reported fact or not.

Query 5: Breakdown of assets by business segment

Objective:

Get the reported fact “Assets” for fiscal period Q1 and fiscal year 2012 for the default legal entity and if the fact does not have the legal entity axis, add the legal entity axis to the fact table returned. Further, return all business segments, whether the reporting entity breaks down its business segments or not (i.e. the total of all business segments is provided for every entity specified in the query.)

Query:

<http://secxbrl.xbrl.io/v1/queries/public/api/facts.jq?method=POST&format=xml&concept=us-gaap:Assets&dei:LegalEntityAxis=sec:DefaultLegalEntity&dei:LegalEntityAxis::default=sec:DefaultLegalEntity>

<http://www.sec.gov/cikrpt/summary?cik=0000019617&fiscalPeriod=Q1&fiscalYear=2012&us-gaap:StatementBusinessSegmentsAxis=ALL&us-gaap:StatementBusinessSegmentsAxis::default=us-gaap:SegmentDomain>

Result:

xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	us-gaap:StatementBusinessSegmentsAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Units	Decimals
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	us-gaap:SegmentDomain	Q1	2012	2320164000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:CommercialBankingMember	Q1	2012	161741000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:CardServicesAndAutoMember	Q1	2012	199579000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:RetailFinancialServicesMember	Q1	2012	269442000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:InvestmentBankMember	Q1	2012	812959000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:CorporatePrivateEquityMember	Q1	2012	713326000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	jpm:TreasuryAndSecuritiesServicesMember	Q1	2012	66732000000	iso4217:USD	-6
us-gaap:Assets	http://www.sec.gov/cikrpt/summary?cik=0000019617	2012-03-31	sec:DefaultLegalEntity	us-gaap:AssetManagementMember	Q1	2012	96385000000	iso4217:USD	-6

The query says to return all reported facts where the concept “us-gaap:Assets” for the CIK number “0000019617” for the fiscal period “Q1” of the fiscal year “2012” for the legal entity which is the default legal entity and for all business segments.