

# Model Portfolio Data Standards

## Specification v1.2

15th March 2019

### Participants

The following document describes the proposed data standard (requirements) for building version 1 of the model portfolio data standards specification. The data standards have been designed in consultation with the following firms: -

AMP	Morningstar
APIR	IRESS
Macquarie	Financial Express
Bennelong Funds	BT
Franklin Templeton	IMAP
Schroders	Colonial First State
Praemium	Netwealth
Copia	IOOF
Elston Asset Management	NABAM
HUB24	Zenith Investment Partners

# Table of Contents

MODEL PORTFOLIO DATA STANDARDS .....	1
SPECIFICATION .....	3
1. INTRODUCTION .....	3
2. CHANGES IN THIS VERSION OF THE SPECIFICATION .....	3
3. DELIVERING THE FILE TO YOUR MANAGED ACCOUNT PROVIDER .....	3
4. FILE CONTENTS .....	4
5. EXAMPLE FILES .....	5
6. APPENDIX .....	9
IRESS Exchange Code Library .....	9
The APIR Coding Regime .....	16

# Specification

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## 1. Introduction

This document specifies the file standards for model managers (creators) to inform managed account providers of new/updated model constituent weightings.

## 2. Changes in this version of the specification

Version	Date	Author	Comments
0.1	28 Feb 2019	Stephen Cumming	First draft
0.2	5 March 2019	Rob Corben	Reviewed
1.0	5 March	Rob Corben	Finalised for distribution and comment
1.1	15 March	Rob Corben	Participant compatibility register IRESS exchange codes APIR code regime benefits

## 3. Delivering the file to your managed account provider

Your managed account provider will inform you about:

1. File format (csv, tab separated, JSON etc);
2. File exchange protocol (SFTP, FTPS, FTP, etc);
3. The cutoff time for uploading files;
4. Whether special execution instructions will be accepted, and how to inform your managed account provider;
5. The standard model codes for your models.

The file name is made up of:

1. A Creator identifier
2. A model code;
3. The local date and time the file was created, in the format YYYYMMDDHHMM.  
If multiple files are received from a model creator, they will be applied in this order.

Eg a file from model creator 'MST' containing a unique model code was created at 15:35 their local time on 26 May 2019 would be named MSTGRWTH23AU201905261535.TXT

## 4. File contents

All fields must be supplied in the order listed.

<b>Name</b>	<b>Format</b>	<b>Mandatory / optional</b>	<b>Description</b>
Model code	Alphanumeric, up to 10 characters	M	The identifier of the model that the target relates to, as provided by your managed accounts provider. A file can contain targets for multiple models. For each of these the target must add to 100.00000. See APIR proposal
Model name	Alphanumeric, up to 100 characters	O	A short description for the model.
Asset code	Alphanumeric, up to 10 characters	M	The stock market ticker symbol for the asset. For cash holdings use the three letter ISO 4217 alpha currency code.
Exchange	Alphanumeric, up to 10 characters	M	IRESS exchange code. For cash holdings use CASH.
ISIN	Alphanumeric, 12 characters	O	The International Securities Identification Number (ISIN) for the asset.
Target	Numeric with up to five decimal places	M	The target percentage of the asset's value within the model, expressed as a percentage from 0.00000 to 100.00000. For each model provided in a file, the target must add to 100.00000.
Previous	Numeric with up to five decimal places	O	Your previous instructed target percentage of the asset's value within the model, expressed as a percentage from 0.00000 to 100.00000
Change	Numeric with up to five decimal places. Negative changes must be signed as such.	O	The change between your previous and your current instructed target percentage of the asset's value within the model, expressed as a signed percentage from -100.00000 to 100.00000

## 5. Example files

### File contents:

Model Code	Model Name	Asset Code	Exchange	ISIN	Target	Previous	Change
SMAIBB07S	Morningstar Balanced	BHP	ASX	AU000000BHP4	10.45675	9.4567	1.00005
SMAIBB07S	Morningstar Balanced	AUD	CASH		5	5	0
SMAIBB07S	Morningstar Balanced	GOOG	NAS	US02079K1079	4.23105	5.4311	-1.20005
SMAIBB07S	Morningstar Balanced	BXB	ASX	AU000000BXB1	0.0107	0.2447	-0.234
SMAIBB07S	Morningstar Balanced	CBA	ASX	AU000000CBA4	50.0071	47.9071	2.1
SMAIBB07S	Morningstar Balanced	COL	ASX	AU0000030678	0	31.9604	-31.9604
SMAIBB07S	Morningstar Balanced	RIO	ASX	AU000000RIO1	30.2944	0	30.2944
SMAXD324	Morningstar Growth	CSL	ASX	AU000000CSL8	10.23	30	-19.77
SMAXD324	Morningstar Growth	IAG	ASX	AU000000IAG3	64.77	50	14.77
SMAXD324	Morningstar Growth	MQG	ASX	AU000000MQG1	10	15	-5
SMAXD324	Morningstar Growth	NAB	ASX	AU000000NAB4	15	5	10

### Tab separated format

```

SMAIBB07S Morningstar BalancedBHP ASX AU000000BHP4 10.4567
9.4567 1
SMAIBB07S Morningstar BalancedAUD CASH 5 5 0
SMAIBB07S Morningstar BalancedGOOGNAS US02079K1079 4.2311 5.4311 -
1.2
SMAIBB07S Morningstar BalancedBXB ASX AU000000BXB1 0.0107 0.2447 -
0.234
SMAIBB07S Morningstar BalancedCBA ASX AU000000CBA4 50.0071
47.9071 2.1
SMAIBB07S Morningstar BalancedCOL ASX AU0000030678 0 31.9604
-31.9604
SMAIBB07S Morningstar BalancedRIO ASX AU000000RIO1 30.2944
0 30.2944
SMAXD324 Morningstar Growth CSL ASX AU000000CSL8 10.23 30 -
19.77
SMAXD324 Morningstar Growth IAG ASX AU000000IAG3 64.77 50
14.77
SMAXD324 Morningstar Growth MQG ASX AU000000MQG1 10 15 -
5
SMAXD324 Morningstar Growth NAB ASX AU000000NAB4 15 5
10

```

### JSON Format

```

{
  "Model constituent": {
    "Model code": "SMAIBB07S",
    "Model name": "Morningstar Balanced",
    "Asset code": "BHP",
    "Exchange": "ASX",
    "ISIN": "AU000000BHP4",
    "Target": 10.4567,
    "Previous": 9.4567,
    "Change": 1
  }
}

```

```

    },
    "Model constituent":{
        "Model code": "SMAIBB07S",
        "Model name": "Morningstar Balanced",
        "Asset code": "AUD",
        "Exchange": "CASH",
        "ISIN": "",
        "Target": 5,
        "Previous": 5,
        "Change": 0
    },
    "Model constituent":{
        "Model code": "SMAIBB07S",
        "Model name": "Morningstar Balanced",
        "Asset code": "GOOG",
        "Exchange": "NAS",
        "ISIN": "US02079K1079",
        "Target": 4.3211,
        "Previous": 5.4311,
        "Change": -1.2
    },
    "Model constituent":{
        "Model code": "SMAIBB07S",
        "Model name": "Morningstar Balanced",
        "Asset code": "BXB",
        "Exchange": "ASX",
        "ISIN": "AU000000BXB1",
        "Target": 0.0107,
        "Previous": 0.2447,
        "Change": -0.234
    },
    "Model constituent":{
        "Model code": "SMAIBB07S",
        "Model name": "Morningstar Balanced",
        "Asset code": "CBA",
        "Exchange": "ASX",
        "ISIN": "AU000000CBA7",
        "Target": 50.0071,
        "Previous": 47.9071,
        "Change": 2.1
    },
    "Model constituent":{
        "Model code": "SMAIBB07S",
        "Model name": "Morningstar Balanced",
        "Asset code": "COL",
        "Exchange": "ASX",
        "ISIN": "AU0000030678",
        "Target": 0,
        "Previous": 31.9604,
        "Change": -31.9604
    },
    "Model constituent":{
        "Model code": "SMAIBB07S",

```

```

    "Model name": "Morningstar Balanced",
    "Asset code": "RIO",
    "Exchange": "ASX",
    "ISIN": "AU000000RIO1",
    "Target": 30.2944,
    "Previous": 0,
    "Change": 30.2944
  },
  "Model constituent": {
    "Model code": "SMAXD324",
    "Model name": "Morningstar Growth",
    "Asset code": "CSL",
    "Exchange": "ASX",
    "ISIN": "AU000000CSL8",
    "Target": 10.23,
    "Previous": 30,
    "Change": -19.77
  },
  "Model constituent": {
    "Model code": "SMAXD324",
    "Model name": "Morningstar Growth",
    "Asset code": "IAG",
    "Exchange": "ASX",
    "ISIN": "AU000000IAG3",
    "Target": 64.77,
    "Previous": 50,
    "Change": 14.77
  },
  "Model constituent": {
    "Model code": "SMAXD324",
    "Model name": "Morningstar Growth",
    "Asset code": "MQG",
    "Exchange": "ASX",
    "ISIN": "AU000000MQG1",
    "Target": 10,
    "Previous": 15,
    "Change": -5
  },
  "Model constituent": {
    "Model code": "SMAXD324",
    "Model name": "Morningstar Growth",
    "Asset code": "NAB",
    "Exchange": "ASX",
    "ISIN": "AU000000NAB4",
    "Target": 15,
    "Previous": 5,
    "Change": 10
  }
}

```

## 6. Participant Compatibility Register

See separate addendum for the model creators / issuers, platforms and vendors that have reviewed the format and confirmed that their systems can support model portfolios using this format.



## 7. Appendix

### IRESS Exchange Code Library

As at March 2019

Location	Description	IRESS Exchange Code
<b>Australia</b>		
Australia	Australia Stock Exchange - Equities	ASX
Australia	Options	AOM
Australia	Warrants & ETFs	AXW
Australia	Futures	AXF
Australia	ASX 24 (Sydney Futures Exchange) - 24 Hour Session	SFE
Australia	CHI-X Equities & Warrants	CXA
Australia	National Stock Exchange of Australia	NSX
Australia	National Stock Exchange of Australia (formerly Bendigo Stock Exchange)	BSX
Australia	Sydney Stock Exchange	SSX
Australia	SIM Venture Securities Exchange	SIMV
New Zealand	New Zealand Stock Exchange	NZT
New Zealand	New Zealand Futures Exchange	NZFX
<b>AFRICA</b>		
South Africa	Johannesburg Stock Exchange (JSE)	JSE
South Africa	JSE Interest Rate Derivatives	YFX
South Africa	JSE Commodity Derivatives	APD
South Africa	JSE Equity Derivatives	EDM
Botswana	Botswana Stock Exchange	BOT
Egypt	Egyptian Exchange	CAI
Ghana	Ghana Stock Exchange	GHA

Ivory Coast	Bourse Regionale des Valeurs Mobilières (Regional Stock Exchange West Africa)	BRV
Kenya	Nairobi Securities Exchange	NAI
Malawi	Malawi Stock Exchange	MSW
Mozambique	Mozambique Stock Exchange	MAP
Mauritius	Stock Exchange of Mauritius	MAU
Morocco	Casablanca Stock Exchange	CAS
Namibia	Namibian Stock Exchange	NAM
Nigeria	Nigerian Stock Exchange	NSA
Rwanda	Rwanda Stock Exchange	RWX
Tanzania	Dar es Salaam Stock Exchange	DAR
Tunisia	Bourse de Tunis	TUN
Uganda	Uganda Securities Exchange	UGA
Zambia	Lusaka Stock Exchange	LUS
Zimbabwe	Zimbabwe Stock Exchange	ZIM
<b>ASIA</b>		
Abu Dhabi	Abu Dhabi Securities Market	ADS
Bahrain	Bahrain Stock Exchange	BAH
Bangladesh	Dhaka Stock Exchange	DHA
China	Shanghai Stock Exchange	SHG
China	Shenzhen Stock Exchange	SHE
Dubai	Dubai Financial Market	DFM
Dubai	Nasdaq Dubai	DIF
Fiji	South Pacific Stock Exchange	SPS
Hong Kong	Hong Kong Exchange	HKE
Hong Kong	Hong Kong Exchange Futures	HKF
India	Bombay Stock Exchange	BSE
India	National Stock Exchange of India	NSE

Indonesia	Indonesia Stock Exchange	IDX
Israel	Tel Aviv Stock Exchange	TAE
Japan	Tokyo Stock Exchange	TKS
Japan	Osaka Securities Exchange	OSE
Jordan	Amman Stock Exchange	AMM
Kuwait	Kuwait Stock Exchange	KUW
Malaysia	Bursa Malaysia	KLS
Oman	Muscat Securities Market	MUS
Pakistan	Karachi Stock Exchange	KAR
Philippines	Philippines Stock Exchange	PHS
Qatar	Qatar Exchange	DSM
Singapore	Singapore Exchange Ltd	SGX
Singapore	Singapore Exchange Futures	SMX
South Korea	Korea Exchange Stock Market	KRX
South Korea	Korea Exchange KOSDAQ	KOS
Sri Lanka	Colombo Stock Exchange	COL
Taiwan	Taiwan Stock Exchange	TAI
Taiwan	Taipei Exchange	ROCO
Thailand	Stock Exchange of Thailand	BKK
Vietnam	HoChiMinh Stock Exchange	STC
Vietnam	Hanoi Stock Exchange	HSTC
<b>BALTIC</b>		
Baltic Union	Nasdaq Baltic Exchange	TAL
Lithuania	Nasdaq Baltic - Nasdaq Vilnius	LIT
<b>EUROPE</b>		
Austria	Vienna Stock Exchange	WBO
Bulgaria	Bulgarian Stock Exchange	BUL
Croatia	Zagreb Stock Exchange	ZAG

Czech Republic	Prague Stock Exchange	PRA
Germany	Deutsche Börse Xetra Core	ETR
Germany	Deutsche Börse Eurex Core	ERX
Germany	International Securities Exchange	ISX
Europe	Cboe Europe Equities (previously Chi-X BATS)	CXU
Europe	Euronext - Brussels	BRU
Europe	Paris	PAR
Europe	Lisbon	LIS
Europe	Amsterdam	AMS
Europe	Euronext Equities and Index Derivatives	LIF
Europe	Euronext Commodities Derivatives	LIC
Greece	Athens Stock Exchange	ATH
Hungary	Budapest Stock Exchange	BUD
Europe	ICE Futures Europe Commodities	IFE
Europe	ICE Futures Europe Financials (LIFFE)	LFE
Ireland	Irish Stock Exchange	DUB
Ireland	Dublin Funds and Bonds	DFB
Italy	Borsa Italiana	MTA
Kazakhstan	Kazakhstan Stock Exchange	KAZ
United Kingdom	London Stock Exchange	LSE
United Kingdom	LSE International Order Book	LSI
United Kingdom	LME London Metal Exchange	LME
Luxembourg	Luxembourg Stock Exchange	LUX
Spain	Bolas Y Mercados Espanoles (Spanish)	MAD
Poland	Warsaw Stock Exchange	WAR
Romania	Bucharest Stock Exchange	BVB
Russian	Russian Trading System Stock Exchange	RTS

Serbia	Belgrade Stock Exchange	BEL
Slovenia	Ljubljana Stock Exchange	LJU
Switzerland	SIX Swiss Exchange	SWX
Turkey	Borsa Istanbul	IST
Ukraine	PFTS Stock Exchange	PFTS
<b>NORDIC</b>		
Denmark	Nasdaq OMX Nordic - Copenhagen Stock Exchange	CSE
Finland	Nasdaq OMX Nordic - Helsinki Stock Exchange	HEL
Sweden	Nasdaq OMX Nordic - Stockholm Stock Exchange	STO
Iceland	Nasdaq OMX Nordic - Iceland Stock Exchange	ICEX
Norway	Oslo Bors Alternative Bond Market	OSL
Norway	Oslo Axess	OSL
Norway	Norwegian over the counter market	OSL
Norway	Oslo Bors (Norway Stock Exchange)	OSL
<b>NORTH AMERICA</b>		
United States	Chicago Mercantile Exchange	CME
United States	Chicago Mercantile Exchange (Composite)	CMC
United States	Chicago Board of Trade	CBT
United States	New York Mercantile Exchange (NYMEX)	NYM
United States	Commodity Exchange (COMEX)	CMX
United States	Finra OTC Bulletin Board and Other OTC	NQB
		NQO
United States	ICE US Futures and Options	ICE
United States	Nasdaq - Quotes on Tape C	NAS
United States	Nasdaq - Quotes on Tape A & B	NYS
United States	New York Stock Exchange (Top 10 BBO)	ARC
		AME
United States	BATS BZX Exchange	BZX

United States	Nasdaq Openview (Available in Canada only)	NAS
United States	Nasdaq Openview (Available in Canada only)	NYS
United States	US Consolidated Tape A	NYS
United States	US Consolidated Tape B	ARC
United States	US Consolidated Tape C	NAS
United States	NYSE OpenBook L2 (available in Canada only)	NYS
United States	NYSE Arcabook L2 (available in Canada only)	ARC
United States	Options Price Reporting Authority (OPRA)	OPX
Canada	Nasdaq CXC	CHI, CHIV
Canada	Nasdaq CX2	CXX, CXXV
Canada	Nasdaq CXD	CXD, CXDV
Canada	Toronto Stock Exchange	TSX
Canada	Toronto Venture Exchange	TSXV
Canada	Toronto Alpha Exchange (TSX Listed)	ALF
Canada	Toronto Alpha Exchange (TSXV Listed)	ALFV
Canada	Montreal Stock Exchange	MX
Canada	Canada Securities Exchange (CSE Listed)	CNQ
Canada	Canada Securities Exchange (All CSE Traded Securities)	PUR
Canada	Aequitas NEO	NEO
Canada	Omega ATS	OMG, OMGV
Canada	Omega Lynx ATS	LNx, LNxV
Canada	TriAct MatchNow	MN, MNV
Canada	Liquidnet Canada	LQN, LQNV
Canada	Instinet Canada Cross	ICX, ICXV
<b>SOUTH AMERICA</b>		
Argentina	Buenos Aires Stock Exchange	BUE
Brazil	Bovespa (Sao Paulo Stock Exchange)	BSP

Chile	Bolsa Comercio de Santiago	SGO
Colombia	Bolsa de Valores de Colombia	BOG
Mexico	Stock Exchange of Mexico	MEX
Peru	Bolsa de Valores de Lima	LIM
Trinidad & Tobago	Trinidad and Tobago Stock Exchange	TRN
Venezuela	Venezuela Bolsa de Valores de Caracas	CAR
<b>GLOBAL</b>		
Global	Foreign Exchange	FX
Global	Foreign Exchange (from TMX)	FX
<b>INDICES*</b>		BATI
	Deutsche Börse Irish Stock Exchange	ISEI
	Deutsche Börse Regional Exchanges Germany	DEUI
	Dow Jones	DJII
	Euronext	ERNI
	FTSE Bursa Malaysia	FBMI
	FTSE JSE	JSEIV
	FTSE Singapore Straits	SGXI
	FTSE UK	FSEI
	Morningstar	MSI
	MSCI	MSCI

## The APIR Coding Regime

For model creators and platforms interested in adopting the APIR coding regime, below is an explanation of the benefits from APIR.

### **Identification of products that are in the market as opposed to the Scheme or RSE that is registered with ASIC and APRA respectively.**

By recording the underlying scheme numbers and some other relevant data points (product type, underlying asset class etc.) against products that are coded, we cross reference products (and therefore their participants) that are active in the market within the regulatory framework.

### **The management of change over time - everything can change but the APIR Code**

Because financial products may be in the market for decades there is a need to accommodate the fact that products may change over time. Fund managers are bought and sold, products change names, funds can be transferred to a new RE/Trustee and importantly, products may change status. Ensuring accuracy of the status and other reference data over time is why APIR supports the issuing of codes with an ongoing maintenance service.

The status is important because it reflects the availability of the product to investors. In the APIR methodology the most common and important statuses are:

**Open** - the product is available to investors and transacts

**Closed** - the product is no longer available to new investors but transacts

**Archived** - the product no longer exists (although the MIS or RSE might). All funds have been returned to investors, transferred to another product or has been wound up for another reason. It no longer transacts in any form.

The importance of these rules has been demonstrated over past decade which has seen a number of major corporate actions such as MLC's acquisition of Aviva and Navigator and AMP's acquisition of AXA. APIR works closely with our clients to capture such changes, managing over 5,000 static data changes across the industry every year. The key is that the APIR code did not change irrespective of ownership changes or name changes.

### **Providing accuracy and certainty for service providers**

As the coding methodology is rules based, and because the APIR service is supported by all major issuers, distributors and other service providers can build processes and systems with certainty. These stakeholders know how the products will be coded and know that broad coverage exists. Similarly, fund managers know that if they code their products they can be onboarded quickly and accurately by platforms, researchers, price distributors, data houses and adviser desktops. System changes and exception processing is eliminated or minimised.

### **Link and anchor products to the product issuer and/or another product**

A product does not exist in isolation and the coding methodology reflects this. A product code can only be issued if we know and have coded the issuing entity (in APIR terms referred to as the Participant). For retail funds and managed accounts this will generally be a Responsible Entity ("RE") and a Trustee for wholesale managed funds and superannuation products.

Similarly, products often have relationships with other products; for example, multiple unit classes issued by a RE may be linked to a single MIS; Investment options belong to a Division which in turn belongs to a Master Trust; SMA Models can be linked to the relevant SMA / MIS.

### **Universally recognised across the Australian wealth management industry**

The APIR code is the established standard for the wealth management industry in Australia. Therefore, SMAs can be easily integrated into the existing technology infrastructure.

- Platforms & APLs in the industry already use APIR codes
- Advisors understand them



- Transaction processing and reporting functions include them

Benefits for all industry participants are basically immediate

- Efficiencies in transactions

Data sharing and transacting between advisers, platforms, administrators, custodians, researchers, fund managers etc is simplified by the use of a standard identifier. The risk of errors is minimised.

- Cross referencing of data

The APIR codes allows disparate data to be distributed, cross referenced and aligned. e.g. pricing, weighting, research data

- Neutrality

APIR is a neutral standard - it is independent and not aligned to any other service provider. Benefits accrue to all participants equally.

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