

Friday, May 21, 2021 | special comment

Predicting WIG Index Membership After June Shuffle

Equity Market, Poland

Analyst: Piotr Poniatowski +48 22 438 24 09

The Warsaw Stock Exchange is set to implement the next reshuffle of WIG20, mWIG40, and sWIG80 constituents, on June 18.

The Reshuffle

The upcoming WIG index revision will be calculated from market valuations after the close of trading on a randomly selected day of the trading week of May 17-21. The following predictions cover the May 17 to May 20 interval, and this time we opt not to present the calculations for each day because the outcomes are very similar under the less restrictive requirements that the WSE uses for its quarterly index reshuffles.

The official announcement of the changes to the WIG20, mWIG40, and sWIG80, is expected June 3rd or 4th.

Index Review Methodology

In very simple terms, a company has to meet a set of requirements to become a constituent of a WIG index; among other things, an eligible company has to have free float higher than 10%, free-float market capitalization larger than the zloty equivalent of €1 million, its securities had to have been traded at least once during the last three months, it has to fulfill a minimum Monthly Turnover Ratio (MTR), and it cannot be flagged on the WSE's Alert List or as being in the Lower Liquidity Zone.

Eligible stocks from index selection lists are ranked based on 12-month trading volumes, at 40% weighting, and free float market capitalization, with a 60% weighting.

You can find the complete rules governing rankings and index construction on the [GPW benchmark Website](#).

WIG20

Our calculations indicate that there are **unlikely to be any changes in the WIG20 index** this revision. The rankings of Biomed-Lublin and mBank, currently on the WIG20 reserve list, are better than those of index constituents Tauron and Asseco Poland, but the latter two continue to occupy high positions and are secure in their WIG20 membership.

Companies likely to make the **WIG20 Reserve List** are, in descending order of estimated average rank: Biomed-Lublin, mBank, Alior Bank, Kruk, Millennium, TEN Square Games, Kernel, XTB, AmRest, and Enea.

Pepco: the Biggest New Listing of 2021 So Far

A newly-listed company can be included in WIG20 as an unscheduled addition if its free float on the first day of trading is higher than 5% of the index's total capitalization. As of this writing the WIG20 market cap is approximately PLN 232 billion. With a free float of 20%, in order to cross the 5% threshold, Pepco's share price on the May 26 debut day would have to rise from PLN 40 to about PLN 100.

Otherwise, following the regular, scheduled review route, the earliest Pepco might enter WIG20 is after the December reshuffle; in September its trading history will still be too short to allow for MTR verification. That being said, with a market cap of PLN 23 billion at the PLN 40 IPO price, **Pepco is definitely a candidate to join the WIG20 index in December.**

mWIG40

According to our calculations, **leaving the mWIG40** mid-caps index in June will be **GTC**, which no longer fulfills the index's MTR requirement (GTC does have the MTR required to enter sWIG80).

The leading **candidate to replace GTC is Mabion**, currently ranked 39th after a spike in trading volumes since the last index review, which was especially evident in March

You will find our current mWIG40 mover prediction on the next page. Note that the "current weight" columns in the following tables represent each company's actual weighting on its respective index at the time of writing, rather than the value given at the last index revision on 19 March 2021.

Companies that might make the **mWIG40 Reserve List** in June are, in descending order of estimated average rank: ASBIS, ML System, Forte, AB, Polimex-Mostostal, Mo-BRUK, Auto Partner, VRG, PCF Group, Ryvu Therapeutics, Ferro, Alumetal, Sanok Rubber, Netia, TIM, and Creepy Jar.

Note that, of late, the reserve lists for both mWIG40 and mWIG80 have been whittled down to the requisite minimum of five names each. We do not expect this to change in June.

What About Recent IPOs?

None of the companies that have made their WSE debuts so far this year are likely to have achieved the minimum Monthly Turnover Ratio required to qualify for mWIG40 yet in May.

- **Huuuge Games** is one month short of having the minimum trading history needed to calculate MTR. Hypothetically, if we removed the MTR requirement, all other things being equal Huuuge Games would qualify for mWIG40 in May with a share of c. 2.5%, as well as being added to the long list of WIG20 candidates.
- **Captor Therapeutics** is another newcomer without a long enough trading history. However the company would not qualify for any of the three main indices even with MTR removed, except to be added to a long list of candidates for sWIG80.
- **Vercom** will not have the necessary trading history before December. However ex. MTR in May the company would make sWIG80 with a 2.9% weighting, as well as qualifying for the mWIG40 long list of candidates.
- **Answear** has the trading history needed, but its ranking is too low at an estimated 150th to make any of the three indices.

Expected mWIG40 Membership after June Reshuffle

Symbol	Name	Current Weight	New Weight	Change (p.p.)
KTY PW	Grupa Kęty	9.12%	9.22%	+0.09
ING PW	ING BSK	8.51%	8.59%	+0.09
MBK PW	mBank	5.70%	5.76%	+0.06
BDX PW	Budimex	5.59%	5.65%	+0.06
KRU PW	Kruk	4.72%	4.77%	+0.05
CAR PW	Inter Cars	4.18%	4.22%	+0.04
MIL PW	Millennium	4.08%	4.12%	+0.04
ALR PW	Alior Bank	3.85%	3.89%	+0.04
KER PW	Kernel	3.70%	3.73%	+0.04
EAT PW	AmRest	3.32%	3.35%	+0.03
TEN PW	TEN Square Games	2.86%	2.89%	+0.03
WPL PW	Wirtualna Polska	2.85%	2.87%	+0.03
ENA PW	Enea	2.62%	2.65%	+0.03
LVC PW	LiveChat	2.59%	2.62%	+0.03
ATT PW	Grupa Azoty	2.38%	2.41%	+0.02
BHW PW	Handlowy	2.02%	2.04%	+0.02
DVL PW	Develia	1.91%	1.93%	+0.02
GPW PW	GPW	1.90%	1.92%	+0.02
DOM PW	Dom Development	1.81%	1.83%	+0.02
BFT PW	Benefit Systems	1.80%	1.81%	+0.02
NEU PW	Neuca	1.78%	1.80%	+0.02
CMR PW	Comarch	1.72%	1.74%	+0.02
PEP PW	Polenergia	1.68%	1.70%	+0.02
EUR PW	Eurocash	1.64%	1.65%	+0.02
11B PW	11 bit studios	1.60%	1.62%	+0.02
CIE PW	Ciech	1.52%	1.53%	+0.02
ASE PW	Asseco SEE	1.47%	1.48%	+0.02
SLV PW	Selvita	1.30%	1.31%	+0.01
AMC PW	Amica	1.21%	1.22%	+0.01
STP PW	Stalprodukt	1.21%	1.22%	+0.01
CLN PW	Celon Pharma	1.04%	1.05%	+0.01
FMF PW	Famur	1.04%	1.05%	+0.01
XTB PW	XTB	0.97%	0.98%	+0.01
DAT PW	Datawalk	0.95%	0.96%	+0.01
ECH PW	Echo Investment	0.91%	0.92%	+0.01
PKP PW	PKP Cargo	0.86%	0.87%	+0.01
PLW PW	PlayWay	0.85%	0.86%	+0.01
OAT PW	OncoArendi	0.61%	0.62%	+0.01
MAB PW	Mabion		0.59%	+0.59
BML PW	Biomed-Lublin	0.53%	0.54%	+0.01

Source: mBank

Who's In and Who's Out of mWIG40

Symbol	Name	Current Weight	New Weight	Change (p.p.)
IN:				
MAB PW	Mabion		0.59%	+0.59
OUT:				
GTC PW	GTC	1.60%		-1.60

Reserve List

ASB PW	ASBIS
MLS PW	ML System
ABE PW	AB
FTE PW	Forte
PXM PW	Polimex-Mostostal
MBR PW	Mo-BRUK
APR PW	Auto Partner
VRG PW	VRG
AML PW	Alumetal
FRO PW	Ferro
PCF PW	PCF Group
RVU PW	Ryvu Therapeutics
SNK PW	Sanok Rubber
NET PW	Netia
TIM PW	TIM
CRJ PW	Creepy Jar

Source: mBank

SWIG80

The following companies are likely to **leave the SWIG80 index** in June per our calculations:

- **ATM Grupa**, which does not have the minimum MTR,
- **Stalprodukt**, moving up to mWIG40, and
- **Sygnity** and **BoomBit**, which, according to our calculations, are ranked at 162nd and 166th position, respectively, just below the 160th position required to stay in the index. Given the the large number of variables, however, our predictions have a margin for error.

The most likely **candidates to join** in their place are:

- **GTC**, relegated from mWIG40 but still ranked at a high 53,
- **PCF Group**, ranked 71. thanks to a relatively high capitalization and trading volumes,
- **Creepy Jar**, ranked 78. thanks to relatively high trading volumes, and
- **Rafako**, ranked 96. thanks to relatively high trading volumes.

Companies that might make the **SWIG80 Reserve List** are, in descending order of estimated average rank: PCC Exol, AC, Photon, ZCh Police, Action, Work Service, Braster, Pure Biologics, Tarczyński, Atende, Kruszwica, Rawlplug, Prairie Mining, Marvipol Development, Unibep, Answear, Artifex Mundi, ZPUE, PGF Polska Grupa Fotowoltaiczna, Dadelo, and NanoGroup.

Again, the actual Reserve List will most likely be restricted to five names.

The current SWIG80 rankings on the next page show as the "current weight" each company's actual weighting on its respective index as of this writing, rather than the weighting reported at the last index revision on 19 March 2021.

Expected sWIG80 Membership after June Reshuffle

Symbol	Name	Current Weight	New Weight	Change (p.p.)
BNPPPL PW	BNP Paribas BP	5.13%	4.87%	-0.26
GTC PW	GTC		4.39%	+4.39
ABE PW	AB	3.75%	3.56%	-0.19
ASB PW	ASBIS	3.69%	3.50%	-0.19
FTE PW	Forte	3.60%	3.42%	-0.18
AML PW	Alumetal	3.01%	2.86%	-0.15
VRG PW	VRG	2.99%	2.84%	-0.15
APR PW	Auto Partner	2.99%	2.84%	-0.15
FRO PW	Ferro	2.90%	2.75%	-0.15
SNK PW	Sanok Rubber	2.55%	2.42%	-0.13
RVU PW	Ryvu Therapeutics	2.53%	2.40%	-0.13
NET PW	Netia	2.46%	2.33%	-0.12
MBR PW	Mo-BRUK	2.35%	2.23%	-0.12
NWG PW	NEWAG	2.28%	2.16%	-0.12
APT PW	Apator	2.12%	2.00%	-0.11
PCF PW	PCF Group		1.97%	+1.97
TIM PW	TIM	2.00%	1.90%	-0.10
MNC PW	Mennica Polska	1.95%	1.85%	-0.10
WWL PW	Wawel	1.84%	1.74%	-0.09
OPN PW	Oponeo.pl	1.75%	1.66%	-0.09
VGO PW	Vigo System	1.58%	1.50%	-0.08
ENT PW	Enter Air	1.56%	1.48%	-0.08
PXM PW	Polimex-Mostostal	1.51%	1.44%	-0.08
1AT PW	Atal	1.49%	1.41%	-0.08
AST PW	Astarta	1.45%	1.38%	-0.07
STX PW	Stalexport	1.45%	1.38%	-0.07
AGO PW	Agora	1.36%	1.29%	-0.07
MLS PW	ML System	1.34%	1.27%	-0.07
ERB PW	Erbud	1.32%	1.25%	-0.07
BKM PW	PBKM	1.29%	1.23%	-0.07
R22 PW	R22	1.25%	1.19%	-0.06
BRS PW	Boryszew	1.16%	1.10%	-0.06
PBX PW	Pekabex	1.12%	1.06%	-0.06
LWB PW	LW Bogdanka	1.12%	1.06%	-0.06
CRJ PW	Creepy Jar		1.05%	+1.05
MRB PW	Mirbud	1.09%	1.03%	-0.06
TOA PW	Toya	1.07%	1.01%	-0.05
RBW PW	Rainbow Tours	1.03%	0.98%	-0.05
VOX PW	Voxel	1.00%	0.95%	-0.05
DCR PW	Decora	1.00%	0.95%	-0.05
AMB PW	Ambra	0.99%	0.94%	-0.05
CMP PW	Comp	0.96%	0.91%	-0.05
PCR PW	PCC Rokita	0.96%	0.91%	-0.05
PHN PW	PHN	0.94%	0.89%	-0.05
KGW PW	ZEW Kogeneracja	0.93%	0.88%	-0.05
MCI PW	MCI Capital	0.91%	0.86%	-0.05
WLT PW	Wielton	0.90%	0.86%	-0.05
BOS PW	BOŚ	0.89%	0.85%	-0.04
TOR PW	Torpol	0.87%	0.83%	-0.04
BIO PW	Bioton	0.85%	0.81%	-0.04
MGT PW	Mangata	0.83%	0.79%	-0.04
IMC PW	IMC	0.80%	0.76%	-0.04
INK PW	Instal Kraków	0.77%	0.73%	-0.04
CIG PW	CI Games	0.74%	0.70%	-0.04
ZEP PW	ZEPAK	0.73%	0.69%	-0.04
COG PW	Cognor	0.73%	0.69%	-0.04
ARH PW	Archicom	0.68%	0.65%	-0.03
UNT PW	Unimot	0.67%	0.63%	-0.03
LTX PW	Lentex	0.63%	0.60%	-0.03
DBC PW	Dębica	0.61%	0.58%	-0.03
PSW PW	PGS Software	0.60%	0.57%	-0.03
ATC PW	Arctic Paper	0.57%	0.54%	-0.03
QRS PW	Quercus TFI	0.55%	0.53%	-0.03
SKH PW	Skarbiec Holding	0.52%	0.50%	-0.03

Source: mBank

Expected sWIG80 Membership after June (cont.)

Symbol	Name	Current Weight	New Weight	Change (p.p.)
SNT PW	Synektik	0.52%	0.49%	-0.03
TRK PW	Trakcja	0.47%	0.45%	-0.02
RFK PW	Rafako		0.44%	+0.44
LBW PW	Lubawa	0.42%	0.40%	-0.02
MDG PW	Medicalgorithmics	0.42%	0.39%	-0.02
CRM PW	PZ Cormay	0.34%	0.32%	-0.02
GTN PW	Getin Holding	0.33%	0.32%	-0.02
GRN PW	Grodno	0.33%	0.31%	-0.02
ULG PW	Ultimate Games	0.32%	0.30%	-0.02
SEN PW	Serinus Energy PLC	0.26%	0.25%	-0.01
INC PW	INC	0.22%	0.21%	-0.01
AWM PW	Airway Medix	0.21%	0.20%	-0.01
GLC PW	Global Cosmed	0.19%	0.18%	-0.01
KVT PW	Krynica Vitamin	0.14%	0.13%	-0.01
SNW PW	Sanwil	0.10%	0.10%	-0.01
HRP PW	Harper Hygienics	0.09%	0.09%	-0.00

Source: mBank

Who's In and Who's Out of sWIG80

Symbol	Name	Current Weight	New Weight	Change (p.p.)
IN:				
GTC PW	GTC		4.39%	+4.39
PCF PW	PCF Group		1.97%	+1.97
CRJ PW	Creepy Jar		1.05%	+1.05
RFK PW	Rafako		0.44%	+0.44

OUT:

MAB PW	Mabion	1.68%		-1.68
ATG PW	ATM Grupa	0.62%		-0.62
SGN PW	Sygnity	0.43%		-0.43
BBT PW	Boombit	0.21%		-0.21

Reserve List

PCX PW	PCC Exol
ACG PW	AC
PEN PW	Photon
PCE PW	ZCh Police
ACT PW	Action
WSE PW	Work Service
BRA PW	Braster
PUR PW	Pure Biologics
TAR PW	Tarczyński
ATD PW	Atende
KSW PW	Kruszwica
RWL PW	Rawlplug
PDZ PW	Prairie Mining
MVP PW	Marvipol Development
UNI PW	Unibep
ANR PW	Answer
ART PW	Artifex Mundi
PUE PW	ZPUE
PGV PW	PGF Polska Grupa Foto
DAD PW	Dadelo
NNG PW	NanoGroup

Source: mBank

List of abbreviations and ratios contained in the report:

EV – net debt + market value (EV – economic value)
EBIT – Earnings Before Interest and Taxes
EBITDA – EBIT + Depreciation and Amortisation
PBA – Profit on Banking Activity
P/CE – price to earnings with amortisation
MC/S – market capitalisation to sales
EBIT/EV – operating profit to economic value
P/E – (Price/Earnings) – price divided by annual net profit per share
ROE – (Return on Equity) – annual net profit divided by average equity
P/BV – (Price/Book Value) – price divided by book value per share
Net debt – credits + debt papers + interest bearing loans – cash and cash equivalents
EBITDA margin – EBITDA/Sales

OVERWEIGHT (OW) – a rating which indicates that we expect a stock to outperform the broad market
NEUTRAL (N) – a rating which indicates that we expect the stock to perform in line with the broad market
UNDERWEIGHT (UW) – a rating which indicates that we expect the stock to underperform the broad market

Recommendations of Biuro maklerskie mBanku:

A recommendation is valid for a period of 9 months, unless a subsequent recommendation is issued within this period. Expected returns from individual recommendations are as follows:

BUY – we expect that the rate of return from an investment will be at least 15%
ACCUMULATE – we expect that the rate of return from an investment will range from 5% to 15%
HOLD – we expect that the rate of return from an investment will range from -5% to +5%
REDUCE – we expect that the rate of return from an investment will range from -5% to -15%
SELL – we expect that an investment will bear a loss greater than 15%
Recommendations are updated at least once every nine months.

mBank S.A. with its registered office in Warsaw at Prosta 18 renders brokerage services via a dedicated organisational unit, the Brokerag Bureau, which uses the Polish name Biuro maklerskie mBanku.

mBank S.A. as part of the Exchange's Analytical Coverage Support Programme ("Programme", <https://www.gpw.pl/eacsp>) prepares analytical reports for the following companies: Cognor Holding, Comarch, Sygnty, VRG. These documents are prepared at the request of Giełda Papierów Wartościowych w Warszawie S.A. ("WSE"), which is entitled to copyrights to these materials. mBank S.A. receives remuneration from the WSE for the preparation of the reports. All documents prepared for the Programme are available at: https://www.mdm.pl/ui-pub/site/market_and_analysis/analysis_and_recommendations/analytical_coverage_support_programme

This document has been created and published by Biuro maklerskie mBanku. The present report expresses the knowledge as well as opinions of the authors on day the report was prepared. The opinions and estimates contained herein constitute our best judgment at this date and time, and are subject to change without notice. The present report was prepared with due care and attention, observing principles of methodological correctness and objectivity, on the basis of sources available to the public, which Biuro maklerskie mBanku considers reliable, including information published by issuers, shares of which are subject to recommendations. However, Biuro maklerskie mBanku, in no case, guarantees the accuracy and completeness of the report, in particular should sources on the basis of which the report was prepared prove to be inaccurate, incomplete or not fully consistent with the facts. mBank S.A. bears no responsibility for investment decisions taken on the basis of the present report or for any damages incurred as a result of investment decisions taken on the basis of the present report.

This document does not constitute an offer or invitation to subscribe for or purchase any financial instruments and neither this document nor anything contained herein shall form the basis of any contract or commitment whatsoever. It is being furnished to you solely for your information and may not be reproduced or redistributed to any other person. This document does not constitute investment, legal, accounting or other advice, and mBank is not liable for damages resulting from or related to the use of data provided in the documents. This document may not be copied, duplicated and/or be directly or indirectly distributed in the United States, Canada, Australia or Japan, nor transferred to citizens or residents of a state where its distribution may be legally restricted, which does not limit the possibility of publishing materials prepared for the Programme on Cognor Holding, Comarch, Sygnty, VRG, mBank or WSE websites. Persons who disseminate this document should be aware of the need to comply with such restrictions.

Recommendations are based on essential data from the entire history of a company being the subject of a recommendation, with particular emphasis on the period since the previous recommendation. Investing in shares is connected with a number of risks including, but not limited to, the macroeconomic situation of the country, changes in legal regulations as well as changes on commodity markets. Full elimination of these risks is virtually impossible.

Recommendations are based on essential data from the entire history of a company being the subject of a recommendation, with particular emphasis on the period since the previous recommendation.

Investing in shares is connected with a number of risks including, but not limited to, the macroeconomic situation of the country, changes in legal regulations as well as changes on commodity markets. Full elimination of these risks is virtually impossible.

mBank S.A. bears no responsibility for investment decisions taken on the basis of the present report or for any damages incurred as a result of investment decisions taken on the basis of the present report.

It is possible that mBank S.A. in its brokerage activity renders, will render or in the past has rendered services for companies and other entities mentioned in the present report.

mBank S.A. does not rule out offering brokerage services to an issuer of securities being the subject of a recommendation. Information about any conflicts of interest that may arise in connection with the issuance of recommendations (should such a conflict exist) is provided below, and it is valid as of the date of the most recent Monthly Report published by Biuro maklerskie mBanku or as of the date of the most recent recommendation issued for an Issuer, as applicable.

This document was not transferred to the issuers prior to its publication.

mBank S.A. may have received compensation from the following companies in the last 12 months: Alchemia, Alior Bank, Ambra, Amica, Answear, Asseco Poland, ATM, Bank Handlowy, Bank Millennium, Bank Pekao, BNP Paribas Bank Polska, Boryszew, BOŚ, Capital Park, CD Projekt, Centrum Nowoczesnych Technologii, Ceramika Nowa Gala, Cognor, Echo Investment, Elemental Holding, Elzab, Enea, Energoaparatúra, Erbud, Ergis, Ferrum, GetBack, Getin Holding, Getin Noble Bank, GPW, Groclin, I2 Development, ING BSK, Kruk, Lokum Deweloper, LW Bogdanka, Mennica Polska, Mo-BRUK, Mostostal Warszawa, Netia, Neuca, NWA1 Dom Maklerski, Oponeo.pl, OTP Bank, PA Nova, PBKM, PGNI, PKO BP, Polimex-Mostostal, Polnord, Polwax, Poznańska Korporacja Budowlana PEKABEX, Primetech, Prochem, Projrzem, PZU, Raiffeisen Bank International, Rawlplug, Rubicon Partners NFI, Santander Bank Polska, Seco/Warwick, Skarbiec Holding, Solar Company, Sygnty, Tarczyński, Ten Square Games, TIM, Unibep, Vistal Gdynia, Wittchen, Work Service, YOLO, Zastal, ZUE.

Asseco Poland provides IT services to mBank S.A.

mBank S.A. has a cash service agreement in place with Pekao and a phone subscription agreement in place with Orange Polska S.A.

mBank S.A., its shareholders and employees may hold long or short positions in the issuers' shares or other financial instruments related to the issuers' shares. mBank, its affiliates and/or clients may conduct or may have conducted transactions for their own account or for account of another with respect to the financial instruments mentioned in this report or related investments before the recipient has received this report.

Copying or publishing the present report, in full or in part, or disseminating in any way information contained in the present report requires the prior written agreement of mBank S.A. Recommendations are addressed to all Clients of Biuro maklerskie mBanku.

Recommendations are addressed to all Clients of Biuro maklerskie mBanku.

All investment recommendations and strategies issued by mBank S.A. over the last 12 months are available at: http://www.mdm.pl/ui-pub/site/market_and_analysis/analysis_and_recommendations/fundamental_analysis/recommendations?recent_filter_active=true&lang=en

The activity of mBank S.A. is subject to the supervision of the Polish Financial Supervision Commission.

Individuals who did not participate in the preparation of recommendations, but had or could have had access to recommendations prior to their publication, are employees of Biuro maklerskie mBanku authorised to access the premises in which recommendations are prepared and/or individuals having to access to recommendations based on their corporate roles, other than the analysts mentioned as the authors of the present recommendations.

This publication constitutes investment research within the meaning of Art. 36.1 of Commission Delegated Regulation (EU) 2017/565.

The compensation of the research analysts responsible for preparing investment research is determined independently of and without regard to the compensation of or revenue generated by any other employee of the Bank, including but not limited to any employee whose business interests may reasonably be considered to conflict with the interests of the persons to whom the investment research prepared by the Research Department of Biuro maklerskie mBanku is disseminated. With that being said, since one of the factors taken into consideration when determining the compensation of research analysts is the degree of fulfillment of annual financial targets by customer service functions, there is a risk that the adequacy of compensation offered to persons preparing investment research will be questioned by a competent oversight body.

For U.S. persons only: This research report is a product of mBank SA which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

This report is intended for distribution by mBank SA only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a-6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor.

In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, mBank SA has entered into an agreement with a U.S. registered broker-dealer, Cabrera Capital Markets. ("Cabrera"). Transactions in securities discussed in this research report should be effected through Cabrera or another U.S. registered broker dealer.

Strong and weak points of valuation methods used in recommendations:

DCF – acknowledged as the most methodologically correct method of valuation; it consists in discounting financial flows generated by a company; its weak point is the significant susceptibility to a change of forecast assumptions in the model.

Relative – based on a comparison of valuation multipliers of companies from a given sector; simple in construction, reflects the current state of the market better than DCF; weak points include substantial variability (fluctuations together with market indices) as well as difficulty in the selection of the group of comparable companies.

Economic profits – discounting of future economic profits; the weak point is high sensitivity to changes in the assumptions made in the valuation model.

Discounted Dividends (DDM) – discounting of future dividends; the weak point is high sensitivity to changes in the assumptions as to future dividends made in the valuation model.

NAV – valuation based on equity value, one of the most frequently used method in case of developing companies; the weak point of the method is that it does not factor in future changes in revenue/profits of a company.

mBank S.A.

Prosta 18
00-850 Warszawa
<http://www.mbank.pl/>

Research Department

Kamil Kliszczyk
director
+48 22 438 24 02
kamil.kliscz@mbank.pl
energy, power generation

Jakub Szkopek
+48 22 438 24 03
jakub.szkopek@mbank.pl
industrials, chemicals, metals

Piotr Poniąkowski
+48 22 438 24 09
piotr.poniakowski@mbank.pl
industrials

Michał Marczak
+48 22 438 24 01
michal.marczak@mbank.pl
strategy

Paweł Szpigel
+48 22 438 24 06
pawel.szpigel@mbank.pl
media, IT, telco

Mikołaj Lemańczyk
+48 22 438 24 07
mikolaj.lemanczyk@mbank.pl
financials

Michał Konarski
+48 22 438 24 05
michal.konarski@mbank.pl
banks, financials

Aleksandra Szklarczyk
+48 22 438 24 04
aleksandra.szklarczyk@mbank.pl
construction, real-estate development

Sales and Trading

Traders

Piotr Gawron
director
+48 22 697 48 95
piotr.gawron@mbank.pl

Adam Prokop
+48 22 697 47 90
adam.prokop@mbank.pl

Krzysztof Bodek
+48 22 697 48 89
krzysztof.bodek@mbank.pl

Magdalena Bernacik
+48 22 697 47 35
magdalena.bernacik@mbank.pl

Tomasz Jakubiec
+48 22 697 47 31
tomasz.jakubiec@mbank.pl

Andrzej Sychowski
+48 22 697 48 46
andrzej.sychowski@mbank.pl

Sales, Foreign Markets

Marzena Łempicka-Wilim
deputy director
+48 22 697 48 82
marzena.lemicka-wilim@mbank.pl

Bartosz Orzechowski
+48 22 697 48 47
bartosz.orzechowski@mbank.pl

Jędrzej Łukomski
+48 22 697 49 85
jedrzej.lukomski@mbank.pl

Private Client Sales

Kamil Szymański
director
kamil.szymanski@mbank.pl

Jarosław Banasiak
deputy director
jaroslaw.banasiak@mbank.pl