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Capital Markets Project

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

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1. EXECUTIVE SUMMARY

Similar to the rest of the world, accounting for NPF activity in Ukraine is a balancing act that requires reporting between fund officials, to participants, to regulators, and to auditors. In each exchange of information, a NPF must be informative, fair, and transparent in the collection and reporting of financial data. Ukraine needs to make a significant effort to harmonize the Ukrainian NAS with IFRS and use IFRS-based analysis methods to regulate the financial services market.

There exist significant differences between IFRS and NAS that create material differences between financial statements issued under each accounting framework given identical audit evidence. One decision that will benefit Ukraine in the long-run will be the complete adoption and integration of the IFRS accounting framework within Ukraine.

Theoretically, IFRS and NAS should be identical. However, Ukraine did not write the complete texts of the IFRS into Ukrainian law. The laws that Ukraine enacted were based upon the IFRS texts, but they were not direct translations. There were many omissions, amendments and additions to the texts that, once enacted, became the body of texts comprising the NAS. If reporting is based upon local standards which are substantively different from international standards, there will persistently be a distortion in the results, thereby disallowing any meaningful comparison between Ukrainian businesses and their international competitors without restatement of the financials.

Significant differences include presentation formats, inventory pricing, deferred taxes, calculation of depreciation and amortization, restatement due to hyperinflation, and disclosures of related-party transactions and financial instruments. There is a need for consolidation of all reporting to provide complete information under each mechanism, and the requirement of a substantive MD&A section is necessary. Because Ukrainian accountants must report predominately under NAS for tax compliance, there is a relatively low demand for IFRS experts as a percentage of the larger demand for accountants in general, and there are even fewer business entities that are required have IFRS expertise. The divergent standards have many influences on financial reporting by NPFs. They create differences in results based upon use of accounting methods and valuation methods. Inclusion of assets (securities) valued in the market that report performance on the basis of NAS further skew the financial statements from what an investor would expect under IFRS financial statements.

Harmonization of NAS with IFRS is now easier since there have been significant efforts recently to create complete and accurate translations of IFRS texts into the Ukrainian and Russian languages subsequent to the adoption of the original NAS over ten years ago.

2. FINANCIAL REPORTING IN UKRAINE

Ukraine has made much advancement in the past decade to bring its financial markets in line with international standards with regard to financial activity. Despite these advancements, there exists a problem in the overall transparency of financial markets in Ukraine. While fraud may exist in the marketplace, the lack of overall transparency is neither due to the efforts of entities seeking deliberately to misrepresent financial information nor due to entities attempting to disguise questionable activity with accounting irregularities or outright fraud. Rather, the overall lack of transparency is the cumulative result of several factors inherent in the current financial markets of Ukraine.

The factors contributing to the issue of transparency are diverse, but begin with the means through which participants in the financial markets communicate performance: financial reporting. Financial reporting is conducted for many reasons and in many formats, but the basis is always a framework of accounting.

Remaining a going concern generally entails attempting to maximize profits while complying with relevant laws regarding operations and taxes. Two types of accounting, managerial and tax, are used worldwide to support this process on a day-to-day basis. Unfortunately, while necessary, neither of these accounting frameworks accurately reflects the financial situation of the company.

Managerial accounting is diverse, creative, and intended for internal use only. It is often focused on the future rather than historical data, and it is often gathered and presented in a manner prescribed by management to facilitate its use in the decision-making process. Tax accounting is normally performed on a cash basis and adjustments are made based upon relevant tax rules rather than any recognized standards for financial reporting. Furthermore, many tax rules are highly-localized to address specific concerns. While both formats are widely used in Ukraine, neither accounting framework is suitable for disclosure to external parties and are therefore not the frameworks for free market economies. Free market economies operate under the framework of International Financial Reporting Standards (IFRS).

To report externally on the financial situation of an entity, the financial data must be accounted for properly by recording actual transactions as well as performing adjustments based upon accepted standards of financial reporting to account for changes in the financial situation due to past and future events that affect, but may not necessarily occur in, the current reporting period. These financial statements should be accompanied by supplemental information describing the entity's plans to move forward as well as a discussion of relevant items not disclosed in the financial data that affected and will affect the financial performance of the entity.

It is at this point in the reporting process where the inherent differences between financial statements prepared according to Ukrainian National Accounting Standards (NAS) begin to diverge from what one would expect to find in financial statements prepared under IFRS, which include effective standards from the previous International Accounting Standards (IAS) framework. Collectively, these differences create a web of reporting standards whose end results have a significant effect on the substantive presentation of financial statements. Some IFRS guidance does not exist under the NAS framework, and the opposite is also true. Often NAS framework is simply different from its corresponding IFRS

framework. Some NAS regulations approve methods used for tax accounting in Ukraine as acceptable for financial reporting.

This paper will analyze some of the significant differences between NAS and IFRS and their effect on financial statements and disclosure, focusing on differences that impact the financial reporting of Non-state Pension Fund (NPF) reporting in Ukraine.

3. IFRS FOR LONG-TERM MARKET DEVELOPMENT AND FINANCIAL LITERACY

The current results of Pillar III NPF activity and the planned implementation of the Pillar II Pension System demonstrate the need for stricter regulation to protect the financial security of Ukraine's future pensioners. The Government of Ukraine (GOU) recently acknowledged this issue in the Cabinet of Ministers of Ukraine Ordinance № 1224 of October 14, 2009, on the Approval of the Concept of Pension Reform Furtherance. The ordinance cites low confidence levels in the NPF and banking systems, a lack of employer interest for NPF participation, a limited range of investment opportunities, and a low-level of public awareness regarding the role and status of the Accumulation System of Pension Provision. Ordinance № 1224 goes on to note that "the capabilities of the non-state pension provision system have not been used to the full extent to resolve the retirement provision problems of people." This is a clear mandate for everyone involved in the NPF structure, from investors to asset managers to regulators, to push for substantive reform. One decision that will benefit Ukraine in the long-run will be the complete adoption and integration of the IFRS accounting framework within Ukraine.

By adhering more strictly to IFRS during the early stages of pension reform, Ukraine will be creating a higher level of transparency in the financial market as well as ensuring the comparability of Ukrainian financial statements to other markets. Accounting is defined as a "system of recording and summarizing business and financial transactions and analyzing, verifying, and reporting the results."¹ If reporting is based upon local standards which are substantively different from international standards, there will persistently be a distortion in the results, thereby disallowing any meaningful comparison between Ukrainian businesses and their international competitors without restatement of financial statements. Additionally, management may be encouraged to pursue odd or unnecessary practices to meet financial targets that stem from local accounting requirements. The current system fosters an introverted mentality towards industry "best practices" and reporting methods.

If these distortions are removed, Ukrainian businesses will have greater access to foreign investment capital because the quality of the financial reporting will allow for a qualitative assessment of the business' profitability through direct comparisons and benchmarking. It will allow businesses to fully implement internationally recognized "best practices" without the need to modify them for local accounting standards. It would reduce costs for firms already reporting to external parties under IFRS and companies that need to integrate their reporting into a global network. Most importantly, it will grant regulators a

¹ Merriam-Webster Online Dictionary

greater array of proven accounting metrics and analysis techniques to discover accounting fraud and financial mismanagement.

Additionally, an international standard will allow non-expert participants in the financial markets a greater chance to educate themselves and make better financial decisions. Studies have found that an individual's level of financial literacy determines how well that individual accumulates and manages wealth. Individuals are better equipped to make financial decisions if they possess an understanding of the concepts of interest, inflation, risk diversification, and have a family history of participation in financial markets.² With no long-term history for either financial market activity or business education, Ukraine is at an important point in the development of its financial markets and lacks widespread financial literacy. There is a relatively small amount of local literature available on investment strategies for Ukraine partly due to the limited range of financial investments, but also due to the fact that internationally accepted investment strategies cannot be directly translated into practice in the Ukrainian market. This is because the financial indicators separating sound investments from riskier investments are based upon analysis of financial reports prepared under an international accounting framework.

4. INTERNATIONAL FINANCIAL REPORTING STANDARDS VS. UKRAINIAN LAW & NATIONAL ACCOUNTING STANDARDS

Despite the formality of the adoption of IFRS in Ukraine, NAS is substantively different from IFRS. Theoretically, IFRS and NAS should be identical. Ukraine has in name adopted IFRS. However, for the complete adoption and conversion to IFRS to occur, Ukraine would have to write the texts of the IFRS into Ukrainian law.³ The laws that Ukraine enacted were based upon the IFRS texts, but they were not direct translations. There exist many omissions, amendments and additions to the texts that are the texts comprising the NAS.

One example is that Ukraine did not adopt a separate law to reflect IAS 20 on Accounting for Government Grants and Disclosure of Government Assistance. Instead, Ukraine condensed over five pages of IFRS guidance into four sentences for inclusion with NAS 15 concerning Revenues. Not only did this act remove a large amount of significant guidance on accounting for grants, but it also effectively places Grants into the category of "Special Purpose Financing" that could be interpreted to apply equally to special purpose vehicle entities and charitable donations. The International Accounting Standards Board (IASB) has offered two translations of IFRS into the Russian language (2006 and 2009). Unfortunately, the IASB has not offered official Ukrainian language translations of IFRS. The Ukrainian Federation of Professional Accountants & Auditors (UFPAA) is licensed by the IFRS London Committee to translate IFRS texts into Ukrainian. The UFPAA has translated three volumes of the IFRS texts into the Ukrainian language (the last version in 2006). However, translation is not enough. The complete standards must be adopted and the concepts must be effectively implemented.

² Financial Literacy among the Young: Evidence and Implications for Consumer Policy (Lusardi, Mitchell and Curto 2009)

³ One Standard, Many Laws (Rapporteur 2008)

Ukrainian law has not reflected the efforts of the IASB and UFPAA to maintain up-to-date IFRS texts, and differences remain. These differences create individual gaps between NAS and IFRS that have a significant effect on the end results in both accounting frameworks. Some of the significant differences are listed below in order of their adoption and presentation under the IFRS framework.

Financial Statements

IAS⁴ defines a complete set of financial statements as:

- (a) **A statement of financial position as at the end of the period.** This is more commonly known as a balance sheet. It is a statement of assets, liabilities, and owners’ equity at a single point in time and is the only financial statement that does not cover a period of time. Because of this, a single balance sheet may present data from several different points in time in order to make a comparison of changes. The basic accounting equation, and the basis for double-entry accounting, is that assets (what a company owns) minus liabilities (what a company owes) equals owners’ equity (the net worth of the company). A balance sheet is traditionally presented in the following manner:

Assets	Liability and Owners’ Equity
Asset A – Cash.....150	Liability A – Payables.....50
Asset B – Inventory.....100	<u>Liability B – Loans</u> 150
	Total Liabilities 200
Asset C – Fixed Assets	
Cost.....200	Capital Stock.....125
<u>Depreciated</u> -150	<u>Retained Earnings</u> -25
Book Value.....50	Total Owner’s Equity 100
Total 300	Total 300

The items and format will vary from entity to entity, but the basic accounting equation will always be true (i.e. the relationship between assets, liabilities, and owners’ equity will always be in balance). The basic accounting equation differs slightly in form when accounting for pension funds: assets minus liabilities equal the net asset value (NAV – the amount available to be shared between all fund participants). The NAV calculation is essential to evaluating NPF performance and is presented in a format similar to the Statement of Net Assets below.

⁴ IAS 1.10

Statement of Net Assets for "Example NPF"		
	Shares	Value
Listing of Assets owned by the NPF	Investment Portfolio	
	Company A Shares	5,000,000 10,000,000
	Company B Shares	1,000,000 4,000,000
	Company C Shares	2,000,000 8,000,000
	Total Investments	22,000,000
Listing of Liabilities owed by the NPF and other assets	Other Assets & Liabilities	
	Other Assets	500,000
	Liabilities	-250,000
		250,000
	Net Assets	22,250,000
	Applicable to 5,000,000 outstanding units	22,250,000
	Net Asset Value Per Unit	4.45

Value of each unit in the NPF

Ownership portions of a fund are referred to as units, and the net asset value per unit (Unit Value) is the indicator used to determine fund performance and the entry or exit price of participants in a fund.

- (b) **A statement of comprehensive income for the period, also known as an income statement, a profit & loss statement, or a statement of financial results.** The income statement accounts are temporary and cover a specific period of time, and the ending date of the period coincides with the balance sheet date. The income statement explains how profit or losses for the period are created by detailing the accounting of revenues and expenses.

Simple Income Statement for Business	
Revenue – Gross Sales.....	600
<u>Cost of Sales</u>	<u>-350</u>
Gross Profit	250
Expense – Licenses.....	-50
Expense – Insurance.....	-75
<u>Expense – Service Charges</u>	<u>-25</u>
Pre-Tax Income	100
<u>Expense – Taxes</u>	<u>-30</u>
Net Income	70

Simple Income Statement for NPF	
Dividend Income	275
Interest Income	140
Financing Income	10
Operating Income	425
Fund Management Fees	-8
Depository Fee Costs	-4
Operating Costs	-12
Investment Results	413
Realized Capital Gain (Loss)	125
Accrued Capital Gain (Loss)	350
Total Capital Gains (Loss)	475
Net Operating Results	888

The income statement provides a vital disclosure for NPF performance evaluation. NAV changes due to three main factors: participant actions (contributions or withdrawals), investment activities (income or losses), and inflation. While inflation increases the amount that an asset is recorded at in the accounting records, it does not increase the intrinsic value of the asset. Likewise, contributions and withdrawals only affect the amount of assets a NPF has available to carryout its investment strategy; they do not provide insight into the performance of investments. Net income or net loss is the sum of all realized (executed) and accrued (recognized in the accounting but not executed) transactions over the accounting period. A NPF's income statement allows an investor to evaluate the outcome of all investment activities and evaluate the costs associated with management of the portfolio.

In a normal business entity, net income that is not distributed to owners and all net losses are carried over to the Retained Earnings account on the balance sheet at the end of the period. In a NPF, asset and liability values marked to market, which means they are changed on a daily basis due to transactions, changes in market prices of assets, and re-valuation of assets. Each of these changes (an increase or decrease to an asset or liability) has a corresponding increase or decrease to an income or loss account. These gains and losses recorded in the balance sheet are accumulated and disclosed in the income statement accounts.

- (c) **A statement of changes in equity for the period.** Similar to the income statement, the equity statement covers a period of time. The equity statement has two main elements: the Paid-In Capital of owners and Retained Earnings allocated to owners. The beginning balance is taken from the previous balance sheet. Any changes based upon transactions between the company and owners are accounted for in the Paid-In Capital portion and the Retained Earnings portion is calculated from the income statement.

The equity statement plays a different role for disclosing financial activity in a traditional company than in a NPF. The reason for this is that traditional business entities have a set number shares authorized for issue, and that number may be different from what has actually been issued. Companies may also repurchase shares to be cancelled or held as treasury stock. The availability of authorized and outstanding shares is closely monitored and requires explicit action on the part of the company to change the amount of either type of share. The amount of shareholding by a particular entity can significantly influence the daily operations of a company through shareholder voting rights. Share ownership may transfer without the company being involved in the transaction, such as a sale of issued shares between individual investors.

Units in a NPF are unlimited in availability for issue or cancellation. However, ownership of units cannot be readily traded as a publicly-traded share may be. Generally, if a participant wants to enter (own units of) a NPF, a contribution buys an amount of units based upon the unit price on the date of the contribution. This inflow of assets (cash) is matched by an issue of units to the account of the participant equal to the funds contributed divided by the unit price. The opposite is true for withdrawals; units are cancelled based upon the amount of funds withdrawn divided by the unit price. In both cases, the NAV of the NPF increases or decreases and is then divided by a larger or smaller number of units, respectively, but the unit value

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does not change. These transactions are always made between the NPF and a contributor or participant directly. (See Appendix B, Tables B3 – B10 for examples of contributions and withdrawals by participants affecting NAV, account balances, and Units per account.)

Because of this difference, equity statements are prepared by NPFs to reflect changes in units held by participants in an effort to disclose fund activity rather than provide a map of ownership percentages of fund assets. Holding a larger number of units, even a majority of units, in a fund will not necessarily result in operational control of a fund’s investment activities. A NPF participant’s statement will appear very similar to an equity statement, detailing both the amount and value of units held, issued, and cancelled during the reporting period.

Ivanov, Ivan Ivanovich		“Example NPF”		January 1, 2010
2009 Annual Participant Report				
		Amount	NAV per Unit	№ of Units
January 1, 2009 Balance		10,307.55	1.02887	10,018.32
		Amount	NAV per Unit	№ of Units
Contributions				Purchased
Date of Contribution	January 31, 2009	1,000.00	1.03044	970.45922
	February 28, 2009	1,000.00	1.05445	948.36171
	March 31, 2009	1,000.00	1.07359	931.45428
Contribution amount in UAH	April 30, 2009	1,000.00	1.10009	909.01654
	May 31, 2009	1,000.00	1.09543	912.88353
	June 30, 2009	1,000.00	1.10253	907.0048
	July 31, 2009	1,000.00	1.08954	917.81853
	August 31, 2009	1,000.00	1.06584	938.22713
	September 30, 2009	1,000.00	1.04589	956.12349
	October 31, 2009	1,000.00	1.02544	975.19114
	November 30, 2009	1,000.00	1.01445	985.75583
	December 31, 2009	1,000.00	0.99554	1,004.48
Total Contributions in 2009		12,000.00		
NAV per Unit at Year End			0.99554	
Total № of Units at Year End				21,375.10
Total Value of Units at Year End				21,279.76
Gain (Loss) Due to Investment Activity		-1,027.79		
January 1, 2010 Balance		21,279.76	0.99554	21,375.10

Equals № of units at year end * NAV per unit at year end
 Also equals Beginning balance + Contributions - Account value at year end

- (d) **A statement of cash flows for the period.** This is a separate statement that shows how balance sheet items and income statement items affected cash and cash equivalent balances. As the name implies, the cash flow statement represents the flow of cash in and out of a business. The cash flow statement has taken on a greater role in the

recent past as an indicator of an entity's health. There are many accounting policies that affect balance sheet and income statement accounts but do not involve an actual cash transaction.⁵ These non-cash transactions may include timing of sales recognition (creating an account receivable by delivering items to a client and recognizing sales revenue, but providing the client with an extended period to pay for the items), inventory valuation methods (recognizing obsolete or damaged inventory and impairing the value for a loss), and depreciation of assets (expensing a portion of the historical cost of a fixed asset to the period in which it was utilized).

Since businesses use cash to handle all obligations and pay dividends to owners, an inflow of cash balances over time is necessary. These inflows may come from operations, investments, or financing activities, and investors should watch for trends in cash flows from all three areas. Cash inflows for NPFs include contributions, investment income, or from the sale of assets. NPF outflows include payment of benefits, liabilities, expenses, and purchases of assets. For businesses, trends in overall cash flow should match trends in profits and losses. Entities reporting profits and decreases in cash balances at the same time are often relying upon accounting policies rather than operations generating net cash inflows to create income. These trends may not necessarily apply to NPFs because cash is used for investment purposes and only a small portion will be held as a cash deposit. Due to this constant re-investment of liquid assets, it is imperative that proven methods be used to value assets in the market and in NPF portfolios because the long-term growth in a portfolio is determined by its investment practices, not the accumulation of cash or trends in free cash flows.

- (e) **Notes, comprising a summary of significant accounting policies and other explanatory information.** In addition to the notes required under IFRS, financial statements for publicly traded companies also include an auditor's opinion and a section for Management's Discussion and Analysis (MD&A) of the company's financial condition.
- (f) **Any restated financial statements from earlier reporting periods.** Occasionally, significant events will require a business to restate the financial statements for past periods. This restatement may be due to several factors, such as fraud (Enron), a change in an accounting policy (inventory valuation method), discovery of an error, or hyperinflation. NPFs revalue assets on a daily basis by practicing mark-to-market accounting. This practice lowers the likelihood of restatement due to hyperinflation.

Chapter IV, Article 11.2 of the Law of Ukraine on Accounting and Financial Reporting states that financial statements "shall include: a balance sheet, an income statement, a cash flow statement, a statement of equity, and notes." NAS 1 through NAS 5 and the aforementioned law combine to provide guidance on the presentation of Ukrainian NAS financial statements. NAS 1 delineates general provisions, objectives, elements, and principles regarding accounting and reporting. NAS 2 deals with the balance sheet (financial position). NAS 3 governs the statement of financial results (comprehensive income). NAS 4 provides guidance on cash flow statements, and NAS 5 deals with the equity statement.

There are differences between the IFRS and NAS throughout these collective sets of guidance. One example is that IAS 1.87 prohibits the presentation of extraordinary items

⁵ Corporate Governance in Ukraine (www.capitalmarkets.kiev.ua 2003)

(such as destruction of property due to a natural disaster) in the statement of comprehensive income. However, NAS 3.35 to 3.37 require separate disclosure of extraordinary income, extraordinary expenses, taxes on extraordinary profit, and the net effect of extraordinary items. The most notable divergence between both frameworks is that IFRS does not require a standard format of the presentation while NAS does. Each NAS (2 – 5) ends with a standardized format that is required for presentation of the respective financial statement. These standards define strict formats and rules for presenting the financials. These formats do not allow for zero balances to be removed, nor do they allow for consolidation of minor balances from similar groups into a single line-item. Additionally, the flow of numerical data is not presented consistently throughout the NAS forms.

Simplified NAS 2 Asset Presentation	
Asset A – Cash.....	150
Asset B – Inventory.....	100
Asset C – Fixed Assets	
<u>Book Value</u>	<u>50</u>
Cost.....	125
Depreciated.....	-75
Total Assets	300
NOTE: The values on NAS balance sheets values are summed downward, but subcategory values are summed upward.	

Simplified NAS 3 Income Statement	
Revenues.....	600
VAT.....	-120
Excise Duty.....	0
<u>Other Deductions</u>	<u>0</u>
Net Revenues	480
<u>Cost of Sales</u>	<u>-350</u>
Gross:	
Profit.....	130
Loss.....	0
NOTE: The values on NAS income statements are always summed downward, including subcategories.	

Related Party Disclosures – IAS 24 vs. NAS 23

A related party is a person or entity that is related to the reporting entity that is preparing its financial statements. Related parties are natural persons and family members of natural persons that have control, influence, or key management functions within the reporting entity. Related parties can also be legal entities that are controlled by people described in the previous sentence, that are members of the same business group (parent, affiliate, etc) or that are partners (certain joint venture structures). Related party transactions are any transfers of resources, services, or obligations between related parties.

It is important to disclose related party transactions because there is a potential to distort financial statements, facilitate misappropriation of assets, and inflate earnings through transactions with no economic substance between such related parties. Undisclosed related party transactions are difficult to detect and require vigilant analysis to uncover. Auditors and regulators must look for indicators of undisclosed related party transactions. These indicators can be interest-free loans, sale or purchase of property at prices significantly different from appraised or market values, non-monetary transactions, open-ended loans, accepting or issuing loans that cannot be repaid, or no-cost transactions.⁶

Additionally, IAS 24.16 requires disclosure of compensation to top management including short-term, post-employment, other long-term, termination, and share-based

⁶ Accounting and Auditing for Related Parties and Related Party Transactions (AICPA 2001)

benefits. The underlying purpose of this disclosure is to provide a list of key personnel that exercise control and influence over the entity. Their actions and decisions influence the profitability of the entity and therefore require that they be disclosed as related parties. All transactions between related parties should be disclosed, so any compensation falls within the scope of disclosure.

NAS 23 does not include this disclosure requirement. This leaves no mechanism to independently verify and evaluate related parties, either in their capacity to influence the entity itself or to cross-reference their activities with other entities to see if any undisclosed related-party transactions occurred, to analyze risk, or to correlate with favorable trends. This lack of disclosure makes it much more difficult to detect potentially fraudulent investment schemes perpetrated by NPF administrators.

Proper Accrual Procedures

One of the significant principles of both IFRS and NAS is that accounting should be performed on an accrual basis rather than a cash basis. Accruals are transactions that are recognized in the accounting system when the income is earned or when the expense is incurred, regardless of when the actual cash flow for the transaction is settled between the parties to the transaction. An example of an accrual in normal business operations would be the sale of a product to a customer that has a credit account with the seller. The seller would deliver the product to the customer but would not receive a cash settlement for the sale. The seller would recognize the income from the sale as a credit, but would debit a receivable account instead of a cash account. When the customer pays, the receivable account is credited (the appropriate transaction reduced to zero) and the cash account is then debited. Examples of common accruals for NPFs include interest income from bonds (which should be accrued daily as it is earned) and service fee expenses (which should be accrued daily as NPF administrators, managers, and custodians earn the fees).

The purpose of accruals is to remain in compliance with the matching principle of accounting, which requires that all income and expenses be recognized in the accounting period in which they are earned or incurred (matched according to time). This principle allows for better evaluation of an entity's profitability by properly allocating transactions according to their receipt or usage as opposed to when cash flows are affected by the transactions. Many different types of transactions are affected by accruals, such as depreciation, amortization, prepaid expenses, deferred taxes, accounts payable, and accounts receivable.

Accruals in Ukraine are not the norm for two significant reasons. First, taxes are calculated on a cash basis with certain provisions for special accruals. Because tax reporting is required of every business entity in Ukraine, but NAS reporting is only required of a small number of certain entities, there is a predominately cash basis mind-set among Ukrainian accountants in both reporting and in practice. Second, given the volatility of the market and exchange rates, the relative youth of the market economy, lack of development of certain business practices such as inventory management and credit accounts for customers, liquidity issues, and an abundance of skepticism amongst business entities, there is a tendency to structure business agreements to mirror cash basis accounting. An example would be that there are generally no accounts receivable or payable between entities where the sale of goods is concerned unless a long and positive history of successful transactions has been established. If a customer wants to purchase goods, payment should be made in full at the time the goods are delivered. There would be no pre-payment that would require the seller to accrue a liability to the customer until it could be recognized as income upon completion of the

transaction, and all of the income (losses) and expenses associated with the transaction would be recognized at the same time the cash transaction occurs. There would also be no liability for future payments on the part of the buyer after the payment.

Where services, rather than goods, are concerned, accruals can take on many different forms depending upon the payment terms, length of service, and the frequency that the reporting entity makes adjustments for accruals. In a NPF, where services are rendered by a Asset Management Company (AMC), Pension Fund Administrator (PFA), and a custodian, and assets are re-valued on a daily basis, timing of the recognition of accruals can significantly affect the account balances of participants. Ukrainian law on NPF activities requires the fund to allocate the profits (losses) to each participant on the calculation date based upon their individual percent ownership on the calculation date. If there is a difference in time between a transaction date and the calculation date, a discrepancy is created between the treatment of contributions, the allocation of profit (losses), and the allocation of expenses and liabilities.

If the reporting period, and therefore calculation period, is other than daily (as it may be in Ukraine for certain items such as fees and dividends), participants who exit the fund during the period but before the calculation date do not absorb the losses for that period. Participants who enter on the last or close to the last days before the calculation date benefit from all the gains during the period. For example:

1. Daily Allocations				
This table shows proper accrual of income by recognizing income as it is earned, resulting in no timing differences.				
Date	Item	Amount	Account	% Ownership
1/1/2010	Opening Balance	50.00		
	Participant A		50.00	100.00%
1/15/2010	Participant B Contributes	50.00		
	Participant A		50.00	50.00%
	Participant B		50.00	50.00%
1/16/2010	Fund Earns & Accrues Profits	100.00		
	Participant A Allocated Accrued Income	50.00	100.00	50.00%
	Participant B Allocated Accrued Income	50.00	100.00	50.00%
1/30/2010	Participant C Contributes	50.00		
	Participant A		100.00	40.00%
	Participant B		100.00	40.00%
	Participant C		50.00	20.00%
1/31/2010	Fund Receives Accrued Profits	100.00		

Account Balance of participant

% ownership in fund held by participant

Account balances increase, but % ownership does not

Ownership % changes, but balance of account does not

No change in accounts Receipt of funds is offset by zeroing out receivable

2. Allocations at Calculation Date (No Accruals, Timing Differences)				
This table shows recognition of income as it is received, resulting in a timing difference that benefits Participant C at the expense of Participants A and B.				
Date	Item	Amount	Account	% Ownership
1/1/2010	Opening Balance	50.00		
	Participant A		50.00	100.00%
1/15/2010	Participant B Contributes	50.00		
	Participant A		50.00	50.00%
	Participant B		50.00	50.00%
1/16/2010	Fund Earns Profits	100.00		
1/30/2010	Participant C Contributes	50.00		
	Participant A		50.00	33.33%
	Participant B		50.00	33.33%
	Participant C		50.00	33.33%
1/31/2010	Receipt of Funds for Earned Profits	100.00		
	Allocation of Profits to A	33.33	83.33	33.33%
	Allocation of Profits to B	33.33	83.33	33.33%
	Allocation of Profits to C	33.33	83.33	33.33%

No accrual of income

Allocation on the date funds are received affects all three participant accounts

In the tables above, one can see that recognizing, calculating and allocating accrual items as they occur as opposed allocating only on the calculation date can significantly change the amount allocated to each participant’s individual account. This example is somewhat extreme because of its simplicity, but minimal amounts (a few kopeks per participant account per calculation day) can compound over several reporting periods to greatly benefit or impair other participants’ account balances.

Seemingly regular transactions can also raise questions about appropriate allocation of funds, such as interest income from a bond. Even if the percentage of ownership in the fund is calculated on a daily basis, interest income may only be paid once during the period. If the bond was already owned at the beginning of the reporting period, the interest income should be allocated (accrued) to participant accounts on a daily basis. In the first example above (Daily Allocations), a monthly interest income payment of 100.00 received on 1/31/2010 would be allocated 40.00 to Participant A, 40.00 to Participant B, and 20.00 to Participant C based upon their percentage of ownership on the date the funds are received. However, this does not accurately reflect the time value of the ownership participation of each participant. Participant A had assets at risk and participated for 31 days during January. Participant B’s assets were at risk for 17 days, and Participant C only experienced 2 days of investment activity. The interest income should be divided by the number of days in the reporting period, and each daily amount should be allocated to each participant based upon the percentage of ownership at the end of each day rather than the percentage of ownership on the date the funds are received (See table below). Furthermore, if a one-time, single payment (rather than monthly or recurring) is announced prior to 1/15/2010 (when Participant B first contributed), 100% of the allocation of profits should benefit Participant A regardless of when the cash inflow will be received by the NPF.

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

3. Allocation of Daily Interest Income					
This table shows proper accrual of interest income from a bond by recognizing income daily as it is earned.					
Date	Item	Amount	Account	% Ownership	
1/1/2010	Opening Balance	50.00			
	Participant A		50.00	100.00%	
1/1/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	3.23	53.23	100.00%	
1/2/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	3.23	56.46	100.00%	
1/3/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	3.23	59.69	100.00%	
▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼					
INTEREST INCOME ACCRUAL CONTINUED DAILY (1/4 to 1/13)					
▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼					
1/14/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	3.23	95.22	100.00%	
1/15/2010	Participant B Contributes	50.00			
	Participant A		95.22	65.57%	
	Participant B		50.00	34.43%	
1/15/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	2.12	97.34	65.57%	
	Participant B Allocated Interest Income	1.11	51.11	34.43%	
1/16/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	2.12	99.46	65.57%	
	Participant B Allocated Interest Income	1.11	52.22	34.43%	
▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼					
INTEREST INCOME ACCRUAL CONTINUED DAILY (1/17 to 1/27)					
▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼					
1/28/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	2.12	124.87	65.57%	
	Participant B Allocated Interest Income	1.11	65.57	34.43%	
1/29/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	2.12	126.99	65.57%	
	Participant B Allocated Interest Income	1.11	66.68	34.43%	
1/30/2010	Participant C Contributes	50.00			
	Participant A		126.99	52.11%	
	Participant B		66.68	27.37%	
	Participant C		50.00	20.52%	
1/30/2010	Interest Income Accrued (100 / 31 days)	3.23			
	Participant A Allocated Interest Income	1.68	128.67	52.11%	
	Participant B Allocated Interest Income	0.88	67.57	27.37%	
	Participant C Allocated Interest Income	0.66	50.66	20.52%	
1/31/2010	Interest Income Accrued (100 / 31 days)	3.10			
	Participant A Allocated Interest Income	1.62	130.29	52.11%	
	Participant B Allocated Interest Income	0.85	68.41	27.37%	
	Participant C Allocated Interest Income	0.64	51.30	20.52%	
1/31/2010	NPF Receives Interest Payment	100.00			

All of accrued interest is allocated to single participant

Participant account after 14 days of accrued interest

Ownership % changes, but balance of account does not

Account balances increase, but % ownership does not

Ownership % changes, but balance of account does not

Account balances increase, but % ownership does not

No change in accounts Receipt of funds is offset by zeroing out receivable

Note that in each of the three tables, the sum of all participant account balances on 1/31/2010 is 250.00, but the distribution of ownership percentage between participants varies greatly under each scenario. The timing of the recognition is a key factor in not only fund performance, but also in the individual participants' account balances that are at risk due to investment activity. Improper allocation of fund expenses can also unfairly penalize participants. AMC, PFA, and custodian fees are often paid on the first of each month. If this payment is due for services rendered in the prior month, it should, at a minimum, be recognized as a liability on the last day of the prior month, which is often not the case. Furthermore, the expense should be accrued daily based upon the service rate and the appropriate financial indicator (i.e., NAV x Service Rate for the AMC, Contributions x Service Rate for Administrator, etc.). Allowing NPFs to charge a monthly fee on a monthly basis (rather than daily) will penalize participants that contribute just prior to the fee date, as they will have to pay for an entire month of service for only a few days of activity on their contribution. If the fees are a prepayment for services in the upcoming month, it should be considered an asset (prepaid expense) and expensed daily over the month as it is earned by the NPF service providers.

Availability of Public Information

Under IFRS, NPF financial statement packages are available online for free from each fund and from regulating authorities. Additionally, the standard IFRS financial statements also include an auditor's opinion, a statement of changes in net assets available for benefits, a summary of significant accounting policies, a description of the plan, description of any changes to the plan during the reporting period, and an MD&A. The availability of information to the public in Ukraine is fractured. The Commission on Regulating Financial Service Markets (FSR) receives a significant amount of information from NPFs under FSR Regulation № 1100. They receive the Financial Statements in compliance with NAS, as well as disclosures regarding revenues, returns and investments, asset listings, operating and benefit liabilities, expenses, participant information, insurance indicators, unit value, total units, and net asset value. Additionally, the FSR requires calculation and disclosure of several different financial ratios under FSR Regulation № 5945. Unfortunately, all of this information is not available to the public.

The public has random access to some of this information, but it is not completely available from one source. Each participant, by law, may receive one free account statement per year. The participant statement only concerns the account of the participant (contributions, income or loss allocations, and withdrawals or benefits paid). The participant does not receive the publicly disclosed financial statements. Once per year, the NPF must publish the financial statements, including notes, along with an auditor's opinion in a public journal. This disclosure is limited in that it does not include the cash flow or equity statements, and it is not provided free of charge to participants, who must purchase the publication with the disclosure. The FSR has provided online access to portions of this information through the Public Disclosure System (PDS). The PDS system contains information about NAV, unit value, and portfolio diversification, but it does not currently provide access to complete financial statements or an auditor's opinion.

Absent from all three of these disclosure mechanisms is a substantive MD&A. The MD&A is an un-audited section of financial statements where the entity's management discusses and analyzes the reporting period and the future of the entity. The MD&A provides valuable information that offers context for the performance of the entity and allows the reader to see the entity through management's eyes. Just as the income statement will provide

data behind the operational and discretionary spending of the business, the MD&A will often provide the reasoning behind decisions, performance issues, and future plans and solutions.

There is a need for combining all reporting to provide complete information under each mechanism, and the requirement of a substantive MD&A section is necessary for participants.

“Example NPF” Management Discussion & Analysis	
<p>Management did not meet its stated goal of creating significant wealth over the past year. Given the volatility of the market and local currency over the past 12 months, management structured the NPF portfolio to protect the principal contributions. As you know, the NPF is a defined contribution plan and under the terms investors are aware of the NPF accepts contributions from participants and matching contributions from employers. Management’s view was that shifting from investing in securities to creating several cash reserves of diversified</p>	<p>currencies across several reputable banking institutions was the best strategy to preserve value during these tough economic times. Management has engaged actuaries to review current demographics of NPF participants to ensure future performance in line with our stated goals. The 42% growth in the NPF portfolio was due largely to inflation and contributions, and management will continue to balance the cost and benefits of administering NPF services to participants with a focus on creating growth via appreciation of assets.</p>

5. OTHER RELEVANT ACCOUNTING-RELATED ISSUES

Recognition & Measurement of Financial Instruments – IAS 39 vs. State Commission for Securities and Stock Market Regulation #339

IAS 39 states that equity instruments that do not have a quoted price from an active market should be valued using an appropriate valuation technique. The valuation technique should maximize market inputs and reflect an objective transaction price of an arm’s length exchange under normal business conditions at the date of measurement.

Article 2.11 of the State Commission for Securities and Stock Market (SSMSC) Regulation #339 states that “securities, whose circulation is suspended, shall be included into the calculation of the value of assets at 75 per cent of their book value.” There is currently a proposed draft for amendments to SSMSC Regulation #339 that would change Article 2.11. The proposed version would require carrying securities suspended from listing on a public exchange at 50% of their last book value until they can be revalued, but no longer than 3 months. If the suspension exceeds 3 months, the securities must be valued at zero.

SSMSC Regulation #339 does not allow for the fair valuation of suspended securities. Securities may be suspended for any number of reasons, such as failure of the listed entity to follow listing procedures. A failure to abide by formal listing procedures has very little effect on the business activity of the listed entity, and therefore would have no significant effect on the value of the entity’s stock. Alternatively, a suspension due to a very serious issue with the listed entity may reduce the value far below the required carrying value of 75%, or the proposed 50%, or even lower.

Additionally, Article 2.8.1 of SSMSC Regulation #339 allows for fair value to be established by the last sales/purchase contract registered with a recognized exchange. The proposed amendments change Article 2.8 to state that listed entities shall be marked to market on the basis of a quotation from a recognized exchange, and this quotation must be from the day preceding the valuation date. Both of these valuation methods allow for price manipulation to occur through related-party contracts or purchases. The proposed changes also incorporate historical pricing in the calculation of NAV by including equities at fair value from the day prior to measurement. The use of historical pricing will be discussed in the next section.

Timing Related to the Contribution Unit Value Calculation

Ukrainian law has required disclosure of a unit value for NPFs operating in Ukraine as of January 1, 2010. However, there has not been a law or regulation in effect prior to this date that governs calculation of the unit value. The lack of a uniform standard for calculating unit value makes it impossible to compare NPFs on the basis of growth or decline in the unit value. Order № 1660 by the FSR on Approval of the Regulation on Non-State Pension Funds Administration mandates a formula for calculating the contribution unit value of a fund that will become effective January 1, 2010. This formula incorporates historic pricing (use of a price from a prior point in time that is known to everyone) rather than forward pricing (use of the price from the next calculation, often the end of the current business day). The formula⁷ is understood as:

$$\text{today's net unit value} = \frac{\text{today's net asset value}}{\text{today's number of units}}$$

This formula mirrors the internationally accepted calculation of unit values. However, the formula for calculating “today’s number of units” has a significant difference from internationally accepted methods. The formula appears⁸ in Order № 1660, and is understood as:

$$\text{today's number of units} = \text{yesterday's number of units} + \frac{\text{today's contributions} - \text{today's total withdrawals}}{\text{yesterday's unit value}}$$

Since fund units are not priced continuously throughout the day as securities are, the international practice is to use forward pricing, which is the final value of the underlying portfolio (NAV) per unit at the end of the current trading day. The use of “yesterday’s unit value” allows for participants conducting transactions “today” to act with knowledge and they do not assume the market risk for “today.”

Appendix B examines a sample NPF and the changes to participant accounts given growth or decline in an equity market. There are scenarios for growth and decline in the market with no NPF participant activity, growth and decline in the market with contributions and withdrawals using historical pricing, and growth and decline in the market with contributions and withdrawals using forward pricing. The summary of all ten tables (B1-B10)

⁷ $NV\ PCU_t = NAV_t / N\ PCU_t$

⁸ $N\ PCU_t = N\ PCU_{t-1} + (C_t - (PB_t + FT_t + CR_t + DDIT_t + SP_t + CF_t)) / NV\ PCU_{t-1}$; Order 1660 has a proposed amendment to remove the SP_t variable from this formula and amend the definitions of C_t and CF_t.

is compelling given that the NAV of the fund does not differ in a growth or decline scenario while using either historical or forward pricing. The only difference occurs in the balances of the participant accounts based upon the distribution of income and losses.

Participants exiting the market (withdrawals) at “yesterday’s unit value” price can effectively shield themselves from losses occurring in the market “today.” Additionally, those losses are then magnified to remaining participants as the decrease in NAV due to a decline in the market is spread over fewer remaining units. The reverse is true as well. Contributions made on days when there is significant market growth unfairly reward participants contributing “today” because they purchase units at “yesterday’s unit value.” This lowers gains to existing participants because the increase in NAV is spread over a larger quantity of units, and unfairly rewards participants contributing “today” because they have knowledge of the market growth at the time the contribution is made. This window to trade with knowledge and historical pricing will be prolonged by the aforementioned planned amendment to SSMSC Regulation #339 to mark equities at the fair value established on the day prior to measurement. The entire portfolio of equities included in the NAV calculation will be a day behind the markets.

By law, the pension contribution unit value must be calculated daily and at the time of the financial reporting. However, unit value in general is not calculated on a real-time, daily basis. This is often attributed to the fact that bank balances are not usually available until a day later (i.e. – a business can only determine Monday’s ending bank balances on Tuesday morning). While this delay in availability of information may exist, it should not disallow the use of forward pricing with regard to contributions to or withdrawals from a NPF participant’s account. Nor should it be used as a justification for using historical prices, since the only purpose of using a known, historical price would be to make sure units are created or removed from the fund on the day funds are contributed or withdrawn from the fund. Funds may be transferred between NPFs and participants at any time, but the number of units created or removed from the fund should not be calculated until the value of a unit is established at the end of the trading day and then recorded at a future price.

Auditing in Ukraine

The value placed on an entity’s financial statements is the product of the entity’s financial performance and the objective presentation of that performance. An audit of the financial statements of a business entity is necessary to provide an objective presentation of the financial statements. An audit must be conducted by an independent, third-party under internationally accepted guidelines to provide assurance that the financial statements fairly reflect the financial performance and position of the reporting entity. A thorough and independent audit provides credibility to financial statements.

Financial statements prepared under NAS and accompanied by a Ukrainian auditor’s opinion cannot be compared to financial statements prepared and audited under the IFRS framework despite the fact that the audit opinions are identical in format. The Accounting Chamber of Ukraine’s Resolution № 28-6 adopted⁹ standards on the “procedure of preparation and holding of audits and execution of their results” based upon the audit standards of the International Organization of Supreme Auditing Institutions. The FSR later issued¹⁰ Order № 5204 on the methodology for preparation and format of audit opinions. The

⁹ Issued on December 27, 2004; Registered by the Ministry of Justice of Ukraine on January 28, 2005

¹⁰ Issued on December 27, 2005

requirements under Ukrainian law for the conduct and procedures Ukrainian auditors must follow are in line with those of International Standards of Auditing (ISA).

The Law of Ukraine on Audit Activities defines an audit as “the verification of accounting data and financial statement indicators of a business entity in order to express an independent opinion of an auditor on their trueness in all material aspects and the conformity with requirements of laws of Ukraine, accounting policies (standards) or other rules (internal policies of business entities) in accordance with requirements of users.” While Ukrainian auditors are compliant with ISA, this compliance is limited to the expectations of objectivity and collection of material audit evidence. It must be stressed that presentation of the financial statements is under the format required by Ukrainian law, not IFRS.

Given the many differences between NAS and IFRS, financial statements prepared under NAS on the basis of completely accurate audit evidence may still misrepresent the true financial situation of an entity from the point of view of an investor. The UFPAA stresses the fact that an auditor’s reputation is also material to the presentation of the financial statements. Setting aside any potential for collusion between an auditor and an entity, there is a real dilemma concerning the supply of audit expertise under IFRS in Ukraine.

Every business entity requires (a) accountant(s) to handle internal and external reporting and prepare tax documentation. The companies that require NAS expertise are generally public entities, PFAs, AMCs, banks, and other types of investment funds. These types of companies are few in number compared to the overall volume of business activity in Ukraine. As of December 2009, there were only 125 companies that offer equity or bonds (municipalities included), 108 NPFs, 36 PFAs, 380 AMCs, and 182 banks operating in Ukraine. Given that only several hundred organizations in Ukraine require NAS expertise, there is a relatively low demand for NAS experts as a percentage of the larger demand for accountants in general. There are even fewer business entities that are required to present financial statements under IFRS.

Because the demand for IFRS expertise is low, the supply of qualified expertise is also limited. The supply side of the IFRS audit expertise market is concentrated mostly in large, international audit firms. These firms possess a competitive advantage with regard to IFRS reporting and international accounting expertise and therefore hold a large share of the market for auditing larger Ukrainian business entities.¹¹ The net result is that Ukraine is not currently educating and developing the majority of its Ukrainian auditors to present financial statements in a manner consistent with IFRS. This lack of development will require an indefinite transition period in the future should Ukraine make efforts to further harmonize its accounting and auditing practices with the standards of the international community.

6. CUMULATIVE EFFECT ON PENSION FUND ACCOUNTING AND FINANCIAL STATEMENTS

The divergent standards have many influences on financial reporting by NPFs. The first influence is simply the differences in results and presentation reported by accountants

¹¹ Accounting Reform in Transition Economies: A Case Study of Ukraine (McGee and Preobragenskaya 2005)

using the NAS framework as opposed to the IFRS framework when given the same historical audit evidence. Depending upon which divergent rules are applied, significant differences can occur that relate to accounting for the same financial item.

The second direct influence stems from the differences in valuation methods used when establishing and reporting the value of an asset or portfolio. The use of historical pricing methods and other valuation techniques that directly affect relevant financial data skew results between IFRS and NAS financial statements.

There is a third influence represented by the accumulation of these first two differences in the cumulative valuation of portfolio assets based upon market prices. This occurs when a market price or quote is used for an asset, but the underlying framework used in the market to value the asset differs from IFRS methods.

In a conversion from NAS to IFRS, these three influences would create three components necessary for analysis in restatements. The first would be the restatement of items in the financial statements from compliance with NAS to IFRS within the NPF. Portfolios would then have to be revalued due to the other two influences. The market prices of each security would be changed because the restatements of their financials of each entity from NAS to IFRS would lead to an adjustment in the market outlook for that entity (the third influence). Then portfolio and unit values should be updated to reflect forward rather than historic pricing.

APPENDIX A: ACRONYMS AND ABBREVIATIONS

AMC – Asset Management Company / Asset Manager

FSR – Commission on Regulating Financial Service Markets

GOU – Government of Ukraine

IAS – International Accounting Standards

IASB – International Accounting Standards Board

ISA – International Standards of Auditing

IFRS – International Financial Reporting Standards

MD&A – Management Discussion and Analysis

NAS – Ukrainian National Accounting Standards

NAV – Net Asset Value, Net Value of Fund Assets

NPF – Non-State Pension Fund

PDS – Public Disclosure System in Ukraine

PFA – Pension Fund Administrator

SSMSC – State Commission for Securities and Stock Market

UFPAA – Ukrainian Federation of Professional Accountants and Auditors

APPENDIX B: HISTORICAL AND FORWARD PRICING

This Appendix outlines an imaginary NPF with a simple portfolio of securities that function as an index fund. These tables outline the variations that may occur in participant account balances over a single day (Day_{i+1}) given different market conditions and unit value pricing methods. The scenarios include no NPF activity with market growth/decline, contributions/withdrawals with market growth/decline using historical pricing, and contributions/withdrawals with market growth/decline using forward pricing. The assumption in all cases is that the notifications for contributions/withdrawals are received at the end of Day_{i+1}, after the markets have moved significantly. Scenarios using historical pricing methods are executed immediately using yesterday's (Day_i) price. Scenarios using forward pricing methods are executed at the end of the trading day (Day_{i+1}) after the new Unit Value has been calculated.

SUMMARY OF TABLES B1 TO B10

I Item	II # Items	III Market Price	IV Value II * III	V Total Units	VI Unit Value ΣIV / V
Stock A	500	17.00	8,500.00	14,500	2.0000
Stock B	250	18.00	4,500.00		
Stock C	700	12.00	8,400.00		
Stock D	720	6.00	4,320.00		
Stock E	320	4.00	1,280.00		
UAH	2,000	1.00	2,000.00		
Liabilities	N/A	N/A	0.00		
PORTFOLIO NAV				29,000.00	

Portfolio at end of Day_i

Participant # and UAH Change

Individual account balances change based upon other participant actions and market movements

Column balances are taken from column G in each table from Table B1 to B10

HISTORICAL PRICING							
A Participant	B NAV of Account	C TABLE B1 (Growth)	D TABLE B3 (#7 +2,000)	E TABLE B4 (#6 -2,000)	F TABLE B2 (Decline)	G TABLE B5 (#7 +2,000)	H TABLE B6 (#6 -2,000)
1	5,000.00	5,139.66	5,130.65	5,150.00	4,860.34	4,869.35	4,850.00
2	2,500.00	2,569.83	2,565.32	2,575.00	2,430.17	2,434.68	2,425.00
3	3,500.00	3,597.76	3,591.45	3,605.00	3,402.24	3,408.55	3,395.00
4	4,300.00	4,420.10	4,412.35	4,429.00	4,179.90	4,187.65	4,171.00
5	10,000.00	10,279.31	10,261.29	10,300.00	9,720.69	9,738.71	9,700.00
6	3,700.00	3,803.34	3,796.68	1,751.00	3,596.66	3,603.32	1,649.00
7	0.00	0.00	2,052.26	0.00	0.00	1,947.74	0.00
NAV TOTAL		29,810.00	31,810.00	27,810.00	28,190.00	30,190.00	26,190.00

Portfolio at end of Day_i Growth/Contribution Decline/No Activity Decline/Withdrawal
 Growth/No Activity Growth/Withdrawal Decline/Contribution

Compare row by row in each column to its corresponding outcome below to see differences in account balances under each scenario

FORWARD PRICING							
I Participant	J NAV of Account	K TABLE B1 (Growth)	L TABLE B7 (#7 +2,000)	M TABLE B8 (#6 -2,000)	N TABLE B2 (Decline)	O TABLE B9 (#7 +2,000)	P TABLE B10 (#6 -2,000)
1	5,000.00	5,139.66	5,139.66	5,139.66	4,860.34	4,860.34	4,860.34
2	2,500.00	2,569.83	2,569.83	2,569.83	2,430.17	2,430.17	2,430.17
3	3,500.00	3,597.76	3,597.76	3,597.76	3,402.24	3,402.24	3,402.24
4	4,300.00	4,420.10	4,420.10	4,420.10	4,179.90	4,179.90	4,179.90
5	10,000.00	10,279.31	10,279.31	10,279.31	9,720.69	9,720.69	9,720.69
6	3,700.00	3,803.34	3,803.34	1,803.34	3,596.66	3,596.66	1,596.66
7	0.00	0.00	2,000.00	0.00	0.00	2,000.00	0.00
NAV TOTAL		29,810.00	31,810.00	27,810.00	28,190.00	30,190.00	26,190.00

NPF NAV does not change based upon pricing methods (Historical vs Forward), but participant account balances do change

Individual account balances do not change based upon other participant actions, account balances change only with market movements

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B1 (3% MARKET GROWTH WITH NO ACTIVITY)

This table shows a simple fund where all securities in the market grew by 3% during one trading day.
There were no cash flows (No contributions, withdrawals, investments purchased, investments sold, income received or expenses paid).

Item	End of Day i			End of Day $i+1$			VII Total Units on Day i	VIII Unit Value on Day i $\sum III / VII$	
	I # Items	II Market Price	III Value $I * II$	IV # Items	V Market Price $II * 1.03$	VI Value $IV * V$			
Stock A	500	17.00	8,500.00	500	17.51	8,755.00	14,500	2.00000	
Stock B	250	18.00	4,500.00	250	18.54	4,635.00			
Stock C	700	12.00	8,400.00	700	12.36	8,652.00			
Stock D	720	6.00	4,320.00	720	6.18	4,449.60			
Stock E	320	4.00	1,280.00	320	4.12	1,318.40			
UAH	2,000	1.00	2,000.00	2,000	1.00	2,000.00			
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00	IX Total Units on Day $i+1$ $VII + 0$	X Unit Value on Day $i+1$ $\sum VI / IX$	
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV			29,810.00	14,500	2.05586

Change in Unit Value due to market changes

Currency value does not increase

Units x Unit Value

Total Units does not change

FUND WITH NO UNIT ACTIVITY

A Participant	DAY i			DAY $i+1$			H Gain (Loss) to Participant $G - D$
	B # Units	C Unit Value $= VIII$	D NAV of Account $B * C$	E # Units	F Unit Value $= X$	G NAV of Account $E * F$	
1	2,500.00000	2.00000	5,000.00	2,500.00000	2.05586	5,139.66	139.66
2	1,250.00000	2.00000	2,500.00	1,250.00000	2.05586	2,569.83	69.83
3	1,750.00000	2.00000	3,500.00	1,750.00000	2.05586	3,597.76	97.76
4	2,150.00000	2.00000	4,300.00	2,150.00000	2.05586	4,420.10	120.10
5	5,000.00000	2.00000	10,000.00	5,000.00000	2.05586	10,279.31	279.31
6	1,850.00000	2.00000	3,700.00	1,850.00000	2.05586	3,803.34	103.34
7	0.00000	2.00000	0.00	0.00000	2.05586	0.00	0.00
FUND TOTAL	14,500.00	2.00000	29,000.00	14,500.00	2.05586	29,810.00	810.00

Change in Participant Account

Total change in NAV during day

Fund and Account NAV increases due to Unit Value increasing

New NAV of fund at End of Day $i+1$

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B2 (3% MARKET DECLINE WITH NO ACTIVITY)

This table shows a simple fund where all securities in the market declined by 3% during one trading day.
There were no cash flows (No contributions, withdrawals, investments purchased, investments sold, income received or expenses paid).

Item	End of Day i			End of Day $i+1$			VII Total Units on Day i	VIII Unit Value on Day i $\sum III / VII$	
	I # Items	II Market Price	III Value $I * II$	IV # Items	V Market Price $II * 0.97$	VI Value $IV * V$			
Stock A	500	17.00	8,500.00	500	16.49	8,245.00	14,500	2.00000	
Stock B	250	18.00	4,500.00	250	17.46	4,365.00			
Stock C	700	12.00	8,400.00	700	11.64	8,148.00			
Stock D	720	6.00	4,320.00	720	5.82	4,190.40			
Stock E	320	4.00	1,280.00	320	3.88	1,241.60			
UAH	2,000	1.00	2,000.00	2,000	1.00	2,000.00			
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00	IX Total Units on Day $i+1$ $VII + 0$	X Unit Value on Day $i+1$ $\sum VI / IX$	
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV			28,190.00	14,500	1.94414

Change in Unit Value due to market changes

Currency value does not decline

Total Units does not change

FUND WITH NO UNIT ACTIVITY

A Participant	DAY i			DAY $i+1$			H Gain (Loss) to Participant $G - D$
	B # Units	C Unit Value $= VIII$	D NAV of Account $B * C$	E # Units	F Unit Value $= X$	G NAV of Account $E * F$	
1	2,500.00000	2.00000	5,000.00	2,500.00000	1.94414	4,860.34	(139.66)
2	1,250.00000	2.00000	2,500.00	1,250.00000	1.94414	2,430.17	(69.83)
3	1,750.00000	2.00000	3,500.00	1,750.00000	1.94414	3,402.24	(97.76)
4	2,150.00000	2.00000	4,300.00	2,150.00000	1.94414	4,179.90	(120.10)
5	5,000.00000	2.00000	10,000.00	5,000.00000	1.94414	9,720.69	(279.31)
6	1,850.00000	2.00000	3,700.00	1,850.00000	1.94414	3,596.66	(103.34)
7	0.00000	2.00000	0.00	0.00000	1.94414	0.00	0.00
FUND TOTAL	14,500.00	2.00000	29,000.00	14,500.00	1.94414	28,190.00	(810.00)

Change in Participant Account

Total change in NAV during day

Fund and Account NAV decreases due to Unit Value decreasing

New NAV of fund at End of Day $i+1$

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B3 (3% MARKET GROWTH IN ONE DAY, CONTRIBUTION OF 2,000 UAH USING HISTORICAL PRICING)

This table shows a simple fund where all securities in the market increased by 3% during one trading day.
There was one cash inflow (a contribution by Participant 7) of 2,000 UAH to purchase units under the historical pricing method (Unit Value on Day_i).

Item	End of Day _i			End of Day _{i+1}			VII Total Units on Day _i	VIII Unit Value on Day _i $\sum III / VII$
	I # Items	II Market Price	III Value $I * II$	IV # Items	V Market Price $II * 1.03$	VI Value $IV * V$		
Stock A	500	17.00	8,500.00	500	17.51	8,755.00	14,500	2.00000
Stock B	250	18.00	4,500.00	250	18.54	4,635.00		
Stock C	700	12.00	8,400.00	700	12.36	8,652.00		
Stock D	720	6.00	4,320.00	720	6.18	4,449.60		
Stock E	320	4.00	1,280.00	320	4.12	1,318.40		
UAH	2,000	1.00	2,000.00	4,000	1.00	4,000.00	IX Total Units on Day _{i+1} $VII + 1,000$	X Unit Value on Day _{i+1} $\sum VI / IX$
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00		
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV		31,810.00	15,500	2.05226

Currency value does not change against itself in market UAH increases with contribution Total Units increase with contribution

Change in Unit Value due to market changes

FUND ISSUING 1,000 UNITS AT YESTERDAY'S UNIT VALUE (+1,000 UNITS FOR +2,000 UAH)

Participant	DAY _i			DAY _{i+1}			H Gain (Loss) to Participant $G - D$
	B # Units	C Unit Value $= V/III$	D NAV of Account $B * C$	E # Units	F Unit Value $= X$	G NAV of Account $E * F$	
1	2,500.00000	2.00000	5,000.00	2,500.00000	2.05226	5,130.65	130.65
2	1,250.00000	2.00000	2,500.00	1,250.00000	2.05226	2,565.32	65.32
3	1,750.00000	2.00000	3,500.00	1,750.00000	2.05226	3,591.45	91.45
4	2,150.00000	2.00000	4,300.00	2,150.00000	2.05226	4,412.35	112.35
5	5,000.00000	2.00000	10,000.00	5,000.00000	2.05226	10,261.29	261.29
6	1,850.00000	2.00000	3,700.00	1,850.00000	2.05226	3,796.68	96.68
7	0.00000	2.00000	0.00	1,000.00000	2.05226	2,052.26	2,052.26
FUND TOTAL	14,500.00	2.00000	29,000.00	15,500.00	2.05226	31,810.00	2,810.00

Fund & Account NAV increases due to Unit Value increase, contribution

New NAV of fund at End of Day_{i+1}

Change in Participant Account

Increase due to contribution and due to share of NAV increase

Total change in NAV during day

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B4 (3% MARKET GROWTH IN ONE DAY, WITHDRAWAL OF 2,000 UAH USING HISTORICAL PRICING)

This table shows a simple fund where all securities in the market increased by 3% during one trading day. There was one cash outflow (a withdrawal by Participant 6) of 2,000 UAH to cancel units under the historical pricing method (Unit Value on Day_i)

Item	End of Day _i			End of Day _{i+1}			VII Total Units on Day _i	VIII Unit Value on Day _i Σ III / VII
	I # Items	II Market Price	III Value I * II	IV # Items	V Market Price II * 1.03	VI Value IV * V		
Stock A	500	17.00	8,500.00	500	17.51	8,755.00	14,500	2.00000
Stock B	250	18.00	4,500.00	250	18.54	4,635.00		
Stock C	700	12.00	8,400.00	700	12.36	8,652.00		
Stock D	720	6.00	4,320.00	720	6.18	4,449.60		
Stock E	320	4.00	1,280.00	320	4.12	1,318.40		
UAH	2,000	1.00	2,000.00	0	1.00	0.00	IX Total Units on Day _{i+1}	X Unit Value on Day _{i+1}
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00	VII - 1,000	Σ VI / IX
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV		27,810.00	13,500	2.06000

Change in Unit Value due to market changes

Currency value does not change against itself in market UAH decreases with withdrawal Total Units decrease with withdrawal

FUND CANCELLING 1,000 UNITS AT YESTERDAY'S UNIT VALUE (-1,000 UNITS FOR -2,000 UAH)

A Participant	DAY _i			DAY _{i+1}			H Gain (Loss) to Participant G - D
	B # Units	C Unit Value = VIII	D NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	
1	2,500.00000	2.00000	5,000.00	2,500.00000	2.06000	5,150.00	150.00
2	1,250.00000	2.00000	2,500.00	1,250.00000	2.06000	2,575.00	75.00
3	1,750.00000	2.00000	3,500.00	1,750.00000	2.06000	3,605.00	105.00
4	2,150.00000	2.00000	4,300.00	2,150.00000	2.06000	4,429.00	129.00
5	5,000.00000	2.00000	10,000.00	5,000.00000	2.06000	10,300.00	300.00
6	1,850.00000	2.00000	3,700.00	850.00000	2.06000	1,751.00	(1,949.00)
7	0.00000	2.00000	0.00		2.06000	0.00	0.00
FUND TOTAL	14,500.00	2.00000	29,000.00	13,500.00	2.06000	27,810.00	(1,190.00)

Change in Participant Account

Decrease due to withdrawal, note that Participant 6 was paid 2,000 UAH. The Net Position is 3,751 UAH. If no activity occurred, would have been 3,803.34 UAH. Participant 6 lost today's gains.

Fund & Account NAV increases with Unit Value, decreased due to withdrawal

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B5 (3% MARKET DECLINE IN ONE DAY, CONTRIBUTION OF 2,000 UAH USING HISTORICAL PRICING)								
This table shows a simple fund where all securities in the market decreased by 3% during one trading day. There was one cash inflow (a contribution by Participant 7) of 2,000 UAH to purchase units under the historical pricing method (Unit Value on Day _i)								
Item	End of Day _i			End of Day _{i+1}			VII Total Units on Day _i	VIII Unit Value on Day _i $\sum III / VII$
	I # Items	II Market Price	III Value $I * II$	IV # Items	V Market Price $II * 0.97$	VI Value $IV * V$		
Stock A	500	17.00	8,500.00	500	16.49	8,245.00	14,500	2.00000
Stock B	250	18.00	4,500.00	250	17.46	4,365.00		
Stock C	700	12.00	8,400.00	700	11.64	8,148.00		
Stock D	720	6.00	4,320.00	720	5.82	4,190.40		
Stock E	320	4.00	1,280.00	320	3.88	1,241.60		
UAH	2,000	1.00	2,000.00	4,000	1.00	4,000.00	IX Total Units on Day _{i+1} VII + 1,000	X Unit Value on Day _{i+1} $\sum VI / IX$
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00		
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV			15,500	1.94774

Change in Unit Value due to market changes

Currency value does not change against itself in market UAH increases with contribution Total Units increase with contribution

FUND ISSUING 1,000 UNITS AT YESTERDAY'S UNIT VALUE (+1,000 UNITS FOR +2,000 UAH)							
Participant	DAY _i			DAY _{i+1}			H Gain (Loss) to Participant G - D
	B # Units	C Unit Value = VIII	D NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	
1	2,500.00000	2.00000	5,000.00	2,500.00000	1.94774	4,869.35	(130.65)
2	1,250.00000	2.00000	2,500.00	1,250.00000	1.94774	2,434.68	(65.32)
3	1,750.00000	2.00000	3,500.00	1,750.00000	1.94774	3,408.55	(91.45)
4	2,150.00000	2.00000	4,300.00	2,150.00000	1.94774	4,187.65	(112.35)
5	5,000.00000	2.00000	10,000.00	5,000.00000	1.94774	9,738.71	(261.29)
6	1,850.00000	2.00000	3,700.00	1,850.00000	1.94774	3,603.32	(96.68)
7	0.00000	2.00000	0.00	1,000.00000	1.94774	1,947.74	1,947.74
FUND TOTAL	14,500.00	2.00000	29,000.00	15,500.00	1.94774	30,190.00	1,190.00

Change in Participant Account

Increase due to contribution, note that account balance is less than 2,000 UAH contribution on same day. Participant 6 absorbed today's losses.

Fund & Account NAV increase with contribution, decrease with market decline

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B6 (3% MARKET DECLINE IN ONE DAY, WITHDRAWAL OF 2,000 UAH USING HISTORICAL PRICING)

This table shows a simple fund where all securities in the market decreased by 3% during one trading day. There was one cash outflow (a withdrawal by Participant 6) of 2,000 UAH to cancel units under the historical pricing method (Unit Value on Day_i)

Item	End of Day _i			End of Day _{i+1}			VII Total Units on Day _i	VIII Unit Value on Day _i Σ III / VII
	I # Items	II Market Price	III Value I * II	IV # Items	V Market Price II * 0.97	VI Value IV * V		
Stock A	500	17.00	8,500.00	500	16.49	8,245.00	14,500	2.00000
Stock B	250	18.00	4,500.00	250	17.46	4,365.00		
Stock C	700	12.00	8,400.00	700	11.64	8,148.00		
Stock D	720	6.00	4,320.00	720	5.82	4,190.40		
Stock E	320	4.00	1,280.00	320	3.88	1,241.60		
UAH	2,000	1.00	2,000.00	0	1.00	0.00	IX Total Units on Day _{i+1} VII - 1,000	X Unit Value on Day _{i+1} Σ VI / IX
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00		
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV			13,500	1.94000

Change in Unit Value due to market changes

Currency value does not change against itself in market UAH decreases with withdrawal Total Units decrease with withdrawal

FUND CANCELLING 1,000 UNITS AT YESTERDAY'S UNIT VALUE (-1,000 UNITS FOR -2,000 UAH)

A Participant	DAY _i			DAY _{i+1}			H Gain (Loss) to Participant G - D
	B # Units	C Unit Value = VIII	D NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	
1	2,500.00000	2.00000	5,000.00	2,500.00000	1.94000	4,850.00	(150.00)
2	1,250.00000	2.00000	2,500.00	1,250.00000	1.94000	2,425.00	(75.00)
3	1,750.00000	2.00000	3,500.00	1,750.00000	1.94000	3,395.00	(105.00)
4	2,150.00000	2.00000	4,300.00	2,150.00000	1.94000	4,171.00	(129.00)
5	5,000.00000	2.00000	10,000.00	5,000.00000	1.94000	9,700.00	(300.00)
6	1,850.00000	2.00000	3,700.00	850.00000	1.94000	1,649.00	(2,051.00)
7	0.00000	2.00000	0.00		1.94000	0.00	0.00
FUND TOTAL	14,500.00	2.00000	29,000.00	13,500.00	1.94000	26,190.00	(2,810.00)

Decrease due to withdrawal, note that Participant 6 was paid 2,000 UAH. The Net Position is 3,649 UAH. If no activity occurred, would have been 3,596.66 UAH. Participant 6 absorbed fewer losses.

Fund & Account NAV decrease due to withdrawal & market decline

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B7 (3% MARKET GROWTH IN ONE DAY, CONTRIBUTION OF 2,000 UAH USING FORWARD PRICING)

This table shows a simple fund where all securities in the market increased by 3% during one trading day.
There was one cash inflow (a contribution by Participant 7) of 2,000 UAH to purchase units under the forward pricing method (Unit Value on Day_{i+1})

Item	End of Day _i			End of Day _{i+1}			VII Total Units C.O.B. Day _i	VIII Unit Value on Day _i ΣIII / VII	
	I # Items	II Market Price	III Value I * II	IV # Items	V Market Price II * 1.03	VI Value IV * V			
Stock A	500	17.00	8,500.00	500	17.51	8,755.00	14,500	2.00000	
Stock B	250	18.00	4,500.00	250	18.54	4,635.00			
Stock C	700	12.00	8,400.00	700	12.36	8,652.00			
Stock D	720	6.00	4,320.00	720	6.18	4,449.60			
Stock E	320	4.00	1,280.00	320	4.12	1,318.40			
UAH	2,000	1.00	2,000.00	2,000	1.00	2,000.00	IX Total Units C.O.B. Day _{i+1}	X Unit Value on Day _{i+1}	
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00	VII + 0	ΣVI / IX	
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV			29,810.00	14,500	2.05586

Change in Unit Value due to market changes

Currency value does not change UAH does not change until new units are issued Total Units does not change for calculation of Unit Value

ISSUING UNITS AFTER CALCULATING TODAY'S UV (+2,000 UAH / 2.05586 UV = 972.82889 UNITS)

DAY _i				DAY _{i+1}			
A Participant	B # Units	C Unit Value = VIII	D NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	H Gain (Loss) to Participant G - D
1	2,500.00000	2.00000	5,000.00	2,500.00000	2.05586	5,139.66	139.66
2	1,250.00000	2.00000	2,500.00	1,250.00000	2.05586	2,569.83	69.83
3	1,750.00000	2.00000	3,500.00	1,750.00000	2.05586	3,597.76	97.76
4	2,150.00000	2.00000	4,300.00	2,150.00000	2.05586	4,420.10	120.10
5	5,000.00000	2.00000	10,000.00	5,000.00000	2.05586	10,279.31	279.31
6	1,850.00000	2.00000	3,700.00	1,850.00000	2.05586	3,803.34	103.34
7	0.00000	2.00000	0.00	972.82889	2.05586	2,000.00	2,000.00
FUND TOTAL	14,500.00	2.00000	29,000.00	15,472.83	2.05586	31,810.00	2,810.00

New Units are issued after pricing of Unit Value at End of Day_{i+1}

Change in Participant account is the same as if No Cash Flows occurred during Day_{i+1}

Increase only from contribution

Fund & Account NAV increases with Unit Value increase, contribution

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B8 (3% MARKET GROWTH IN ONE DAY, WITHDRAWAL OF 2,000 UAH USING FORWARD PRICING)

This table shows a simple fund where all securities in the market increased by 3% during one trading day.
There was one cash outflow (a withdrawal by Participant 6) of 2,000 UAH to cancel units under the forward pricing method (Unit Value on Day_{i+1})

Item	End of Day _i			End of Day _{i+1}			VII Total Units C.O.B. Day _i	VIII Unit Value on Day _i $\Sigma III / VII$
	I # Items	II Market Price	III Value $I * II$	IV # Items	V Market Price $II * 1.03$	VI Value $IV * V$		
Stock A	500	17.00	8,500.00	500	17.51	8,755.00	14,500	2.00000
Stock B	250	18.00	4,500.00	250	18.54	4,635.00		
Stock C	700	12.00	8,400.00	700	12.36	8,652.00		
Stock D	720	6.00	4,320.00	720	6.18	4,449.60		
Stock E	320	4.00	1,280.00	320	4.12	1,318.40		
UAH	2,000	1.00	2,000.00	2,000	1.00	2,000.00	14,500	2.05586
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00		
PORTFOLIO NAV			29,000.00			29,810.00	14,500	2.05586

Change in Unit Value due to market changes

Currency value does not change UAH does not change until new units are cancelled Total Units does not change for calculation of Unit Value

CANCELLING UNITS AFTER CALCULATING TODAY'S UV (-2,000 UAH / 2.05586 UV = -972.82889 UNITS)

Participant	DAY _i			DAY _{i+1}			H Gain (Loss) to Participant G - D
	A # Units	B Unit Value = VIII	C NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	
1	2,500.00000	2.00000	5,000.00	2,500.00000	2.05586	5,139.66	139.66
2	1,250.00000	2.00000	2,500.00	1,250.00000	2.05586	2,569.83	69.83
3	1,750.00000	2.00000	3,500.00	1,750.00000	2.05586	3,597.76	97.76
4	2,150.00000	2.00000	4,300.00	2,150.00000	2.05586	4,420.10	120.10
5	5,000.00000	2.00000	10,000.00	5,000.00000	2.05586	10,279.31	279.31
6	1,850.00000	2.00000	3,700.00	877.17111	2.05586	1,803.34	(1,896.66)
7	0.00000	2.00000	0.00	0.00000	2.05586	0.00	0.00
FUND TOTAL	14,500.00	2.00000	29,000.00	13,527.17	2.05586	27,810.00	(1,190.00)

Units are cancelled after pricing of Unit Value at End of Day_{i+1}

Change in Participant account is the same as if No Cash Flows occurred during Day_{i+1}

Participant 6 withdrew 2,000 UAH
Net position is 3,803.34
Realized today's gain
Same as if no activity occurred

Fund & Account NAV changes with Unit Value increase, decreases due to withdrawal

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B9 (3% MARKET DECLINE IN ONE DAY, CONTRIBUTION OF 2,000 UAH USING FORWARD PRICING)

This table shows a simple fund where all securities in the market decreased by 3% during one trading day.
There was one cash inflow (a contribution by Participant 7) of 2,000 UAH to purchase units under the forward pricing method (Unit Value on Day_{i+1})

Item	End of Day _i			End of Day _{i+1}			VII Total Units C.O.B. Day _i	VIII Unit Value on Day _i Σ III / VII
	I # Items	II Market Price	III Value I * II	IV # Items	V Market Price II * 0.97	VI Value IV * V		
Stock A	500	17.00	8,500.00	500	16.49	8,245.00	14,500	2.00000
Stock B	250	18.00	4,500.00	250	17.46	4,365.00		
Stock C	700	12.00	8,400.00	700	11.64	8,148.00		
Stock D	720	6.00	4,320.00	720	5.82	4,190.40		
Stock E	320	4.00	1,280.00	320	3.88	1,241.60		
UAH	2,000	1.00	2,000.00	2,000	1.00	2,000.00	IX Total Units C.O.B. Day _{i+1}	X Unit Value on Day _{i+1}
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00	VII + 0	Σ VI / IX
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV		28,190.00	14,500	1.94414

Change in Unit Value due to market changes

Currency value does not change

UAH does not change until new units are issued

Total Units does not change for calculation of Unit Value

ISSUING UNITS AFTER CALCULATING TODAY'S UV (+2,000 UAH / 1.94414 UV = 1,028.73250 UNITS)

A Participant	DAY _i			DAY _{i+1}			H Gain (Loss) to Participant G - D
	B # Units	C Unit Value = VIII	D NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	
1	2,500.00000	2.00000	5,000.00	2,500.00000	1.94414	4,860.34	(139.66)
2	1,250.00000	2.00000	2,500.00	1,250.00000	1.94414	2,430.17	(69.83)
3	1,750.00000	2.00000	3,500.00	1,750.00000	1.94414	3,402.24	(97.76)
4	2,150.00000	2.00000	4,300.00	2,150.00000	1.94414	4,179.90	(120.10)
5	5,000.00000	2.00000	10,000.00	5,000.00000	1.94414	9,720.69	(279.31)
6	1,850.00000	2.00000	3,700.00	1,850.00000	1.94414	3,596.66	(103.34)
7	0.00000	2.00000	0.00	1,028.73250	1.94414	2,000.00	2,000.00
FUND TOTAL	14,500.00	2.00000	29,000.00	15,528.73	1.94414	30,190.00	1,190.00

New Units are issued after pricing of Unit Value at End of Day_{i+1}

Change in Participant account is the same as if No Cash Flows occurred during Day_{i+1}

Increase only from contribution Participant 6 did not absorb today's loss.

Fund & Account NAV changes with Unit Value decrease, contribution

COMPARISON OF UKRAINIAN ACCOUNTING WITH INTERNATIONAL ACCOUNTING

TABLE B10 (3% MARKET DECLINE IN ONE DAY, WITHDRAWAL OF 2,000 UAH USING FORWARD PRICING)

This table shows a simple fund where all securities in the market decreased by 3% during one trading day. There was one cash outflow (a withdrawal by Participant 6) of 2,000 UAH to cancel units under the forward pricing method (Unit Value on Day_{i+1})

Item	End of Day _i			End of Day _{i+1}			VII Total Units C.O.B. Day _i	VIII Unit Value on Day _i Σ III / VII	
	I # Items	II Market Price	III Value I * II	IV # Items	V Market Price II * 0.97	VI Value IV * V			
Stock A	500	17.00	8,500.00	500	16.49	8,245.00	14,500	2.00000	
Stock B	250	18.00	4,500.00	250	17.46	4,365.00			
Stock C	700	12.00	8,400.00	700	11.64	8,148.00			
Stock D	720	6.00	4,320.00	720	5.82	4,190.40			
Stock E	320	4.00	1,280.00	320	3.88	1,241.60			
UAH	2,000	1.00	2,000.00	2,000	1.00	2,000.00	IX Total Units C.O.B. Day _{i+1} VII + 0	X Unit Value on Day _{i+1} Σ VI / IX	
Liabilities	N/A	N/A	0.00	N/A	N/A	0.00			
PORTFOLIO NAV			29,000.00	PORTFOLIO NAV			28,190.00	14,500	1.94414

Change in Unit Value due to market changes

Currency value does not change UAH does not change until new units are cancelled Total Units does not change for calculation of Unit Value

CANCELLING UNITS AFTER CALCULATING TODAY'S UV (-2,000 UAH / 1.94414 UV = -1,028.73250 UNITS)

A Participant	DAY _i			DAY _{i+1}			
	B # Units	C Unit Value = VIII	D NAV of Account B * C	E # Units	F Unit Value = X	G NAV of Account E * F	H Gain (Loss) to Participant G - D
1	2,500.00000	2.00000	5,000.00	2,500.00000	1.94414	4,860.34	(139.66)
2	1,250.00000	2.00000	2,500.00	1,250.00000	1.94414	2,430.17	(69.83)
3	1,750.00000	2.00000	3,500.00	1,750.00000	1.94414	3,402.24	(97.76)
4	2,150.00000	2.00000	4,300.00	2,150.00000	1.94414	4,179.90	(120.10)
5	5,000.00000	2.00000	10,000.00	5,000.00000	1.94414	9,720.69	(279.31)
6	1,850.00000	2.00000	3,700.00	821.26750	1.94414	1,596.66	(2,103.34)
7	0.00000	2.00000	0.00	0.00000	1.94414	0.00	0.00
FUND TOTAL	14,500.00	2.00000	29,000.00	13,471.27	1.94414	26,190.00	(2,810.00)

Units are cancelled after pricing of Unit Value at End of Day_{i+1}

Change in Participant account is the same as if No Cash Flows occurred during Day_{i+1}

Participant 6 withdrew 2,000 UAH
Net position is 3,596.66 UAH
Realized today's loss
Same as if no activity occurred

Fund & Account NAV changes with Unit Value decrease, withdrawal